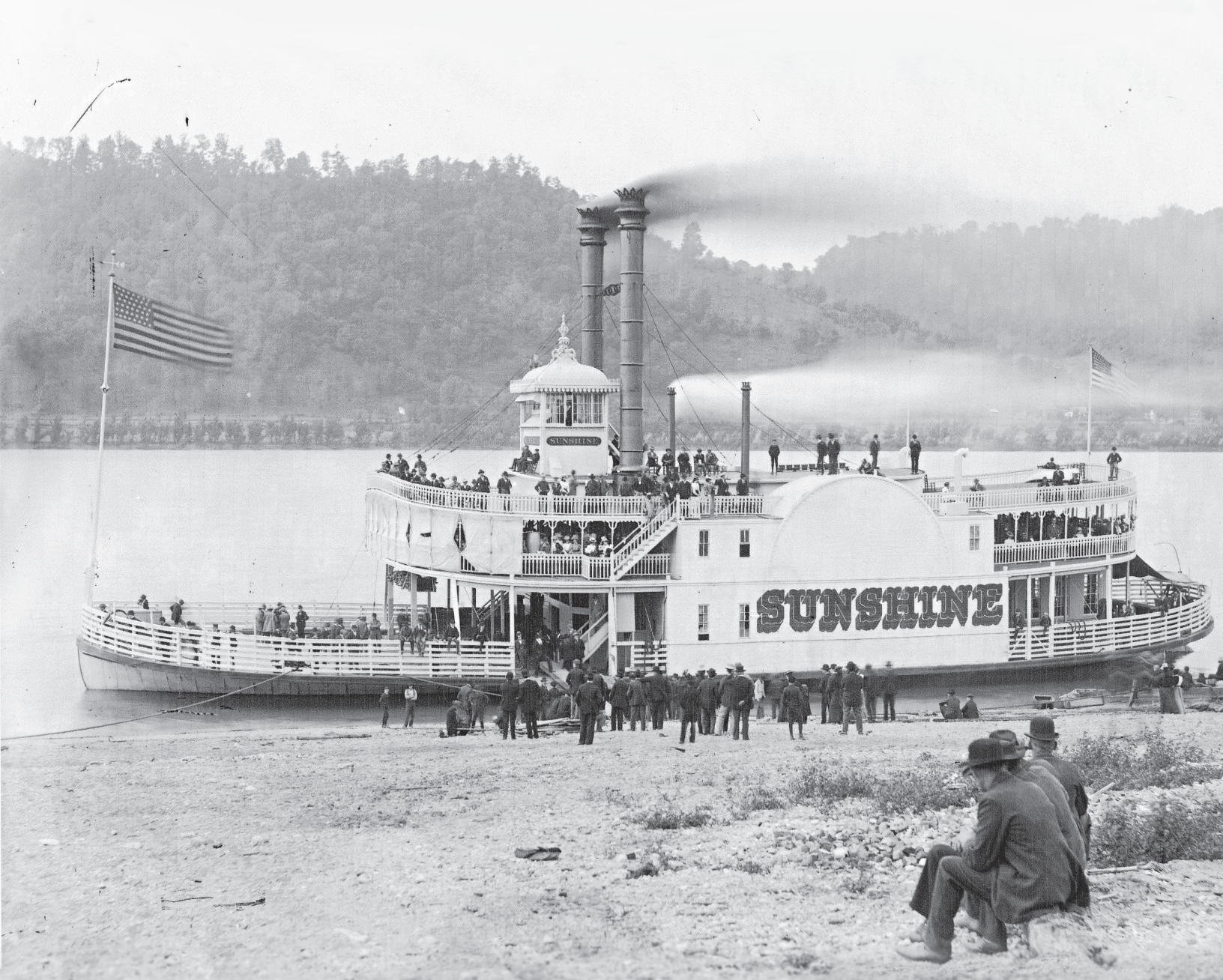
S&D REFLECTOR

Published by Sons and Daughters of Pioneer Rivermen

Vol. 51, No. 2 | Marietta, Ohio | June 2014



A Breath of Fresh Steam Aboard the BELLE

1831-40 Western Rivers Index (Part 3)

The Fast Boats: Inland River Greyhounds

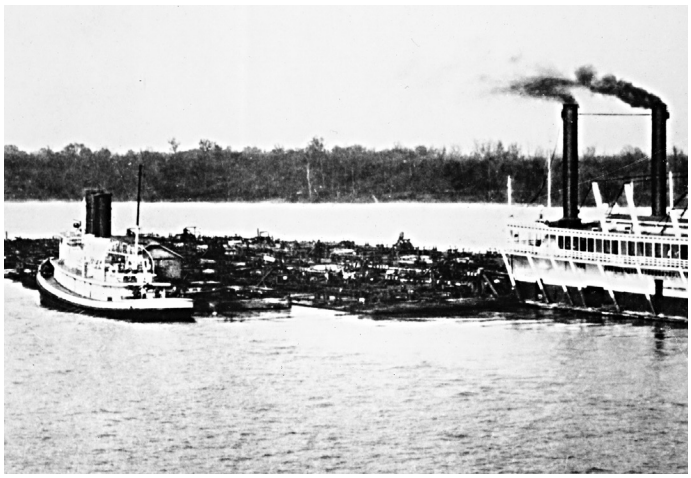
Front Cover

Louisville and Jeffersonville Ferry Co.'s SUNSHINE (5235) shown sometime during her 19 year career running between Louisville and Fern Grove Park twelve miles upriver. Built by Howards for $21,750 in 1888, her hull measured 175' x 37' x 5.8'. She carried three boilers, 42" diameter by 26' long, supplying steam for her engines, 18's with 6-foot stroke. This sidewheeler had the distinction of ferrying passengers at two of the premier recreational parks along the middle Ohio at Louisville and Cincinnati. Read more about her travels on page 44. *Photo from Jerry Sutphin's steamboat collection.*

Reflections from Our Readers

Capt. Bob Reynolds writes: "I was glad to see the March REFLECTOR. Another good-looking issue, but what intrigued me most was the picture of the SPRAGUE on the back cover. I wish I could see that tug in the far left of the photograph. I have often wondered how in the world the SPRAGUE handled their tows for Standard Oil. Having worked for thirty years in the oil tow business, I know how particular dockmen are about spotting barges exactly right. They have to line up with hoses on the docks, and even a foot or two off spot makes the barges impossible to hook up. One thing I have thought was that they would almost have to have a tug or harbor boat to at least assist them in making and breaking tow, spotting barges, etc. I cannot imagine using that huge boat to maneuver a barge into place in the tow or take a barge or two and put them on the dock and get them spotted with accuracy. The picture on the back cover tends to confirm my suspicion of them having a smaller boat to assist them in close work. In the picture in question, it appears to me they are flanking a bend. I would not be at all surprised to find out they carried a small towboat with them everywhere they went to handle the close work. I have seen reference online to the Aldrich Murray papers on the SPRAGUE at Louisiana State University in Baton Rouge, papers that supposedly contain the type of info I'm looking for. Alas, I have not been able to go to Baton Rouge and research that — I probably never will. There are so many questions I wish I had asked of those who knew this stuff first hand!"

We appreciate Bob's comments about the back cover photo of SPRAGUE, and have sent him a closeup of the tug which we unfortunately cropped off on the original before printing. We have dutifully reproduced it here for our readers.



Melanie Simko writes: "I am researching an ancestor of mine from Parkersburg, WV. His name was Enoch Monroe Wires and listed on his marriage license of May 12, 1885 was an occupation as steamboatman. Are there any resources that you or your readers know about where I can investigate which boat he may have worked on or any information about his career? Thank you."

In doing research for Melanie's inquiry, neither Capt. Way's directories nor past issues of the REFLECTOR provided any information about Enoch Wires. We did find the family name listed for Charles J. Wires (1922-2002), a licensed steam and diesel engineer who had two brothers. Charles built radio-controlled models of the IDLEWILD and BELLE OF LOUISVILLE which he displayed at S&D meetings. However, none of these appear to be relatives of Enoch. Any assistance our readers can provide would be greatly appreciated. You may contact Melanie at her email address: melinsk@mac.com.

continued on page 48

S&D's 75th Anniversary Gala Celebration Sept. 12-13

Join your friends and fellow members for a memorable weekend celebration of S&D's 75th anniversary. Highlights that weekend include:

Friday, Sept. 12, 8:00-10:00 p.m. Meet and Greet at Ohio River Museum. W. P. SNYDER, JR. will be open for inspection after her extensive renovations. Museum will feature the new Thornton Barrette exhibit. Barrette was a noted photographer of steamboats and river scenes, and this original photo collection came to S&D through the generosity of Al Miller. Mr. Miller donated this collection in memory of Capt. Lindsey Miller, longtime master-pilot in the towing industry. Light refreshments served.

Saturday, Sept. 13, 9:00 a.m. Annual business meeting in ballroom of Lafayette Hotel.

11:00 a.m. - 3:00 p.m. Scenic motorcoach tour to Clarington, OH for luncheon atop hill behind town at Board Member Taylor Abbott's grandparent's home overlooking Ohio River. We are guests of Ohio Valley River Museum at 1:00 for a private tour of their recently opened museum. On our return trip at 2:00, we will stop at Hannibal Locks and Dam to view their outdoor exhibits. The tour and luncheon is $35 per person. Deadline for reservations is August 15, 2014. **Mail payment to S&D, P. O. Box 352, Marietta, OH 45750**

6:00 p.m. Dinner in the banquet room of Lafayette Hotel with choice of entree: prime rib $27, salmon $28, and lemon chicken $22. Meal includes roll, salad, potato, vegetable, dessert, and tea or coffee. Make your dinner reservation at **800-331-9336** or **740-373-5522**. Our guest speaker for the after dinner program is Mr. William Dow, owner of Lake George Steamboat Company and New Orleans Steamboat Company. Mr. Dow is no stranger to S&D as he and his father Capt. Wilbur Dow appeared frequently in the pages of the Reflector.

This is but a partial listing of our 75th Annual Meeting highlights. There are definitely some surprises planned for this gala weekend as well.

In This Issue

Columns

Features

Articles

Thinking about submitting to the Reflector?

Please follow these guidelines:

Articles

» *500 words or less*
» *.rtf or .doc format (no PDFs)*

Features

» *750 words or more*
» *.rtf or .doc format (no PDFs)*

Images

» *at least 300 dpi*
» *.jpg, .tif, .png, or .bmp format*
» *minimal compression*

Send to the Editor as an e-mail attachment

"Lighting Up the Past, Present, and Future of the Mississippi River System"

1939 America's Inland Rivers Society 2014

SONS AND DAUGHTERS OF PIONEER RIVERMEN

PO Box 352
Marietta, OH 45750

www.s-and-d.org

OFFICERS

Jeffrey L. Spear, President • Vic Canfield, Vice President
Sharon Reynolds, Secretary • R. Dale Flick, Treasurer

BOARD OF GOVERNORS

Term Ending 2014
Capt. Robert Reynolds
Michael Jones
Taylor Abbott

Term Ending 2015
Capt. William Judd
Capt. Tom Dunn
Fred Rutter

Term Ending 2016
Lee Woodruff, Chairman
Capt. William Barr
John Fryant

J. MACK GAMBLE FUND TRUSTEES

Capt. William Barr, Chairman • Frank Pollock • Jim Bupp

MUSEUM COMMITTEE CHAIRMAN

William Reynolds

The *only* requirement for membership in S&D is an interest in river history!

The S&D REFLECTOR *is the property of the Sons & Daughters of Pioneer Rivermen Corporation and is not to be reprinted or electronically reproduced without written permission of the Editor.*

S&D REFLECTOR

Published by Sons and Daughters of Pioneer Rivermen

Vol. 51, No. 2 Marietta, Ohio June 2014
ISSN 1087-9803 Post Office Permit #73, Marietta, OH

The name of this publication comes from the *Fleetwood Reflector* published in 1869 aboard the packet FLEETWOOD. This quarterly was originated by Capt. Frederick Way, Jr. in 1964.

Correspondence is invited and serious papers on river related history from our readers are always welcomed. Please check with the Editor before sending any material on a "loan" basis.

David Tschiggfrie, Editor
2723 Shetland Court
Dubuque, IA 52001
reflector@comcast.net

REFLECTOR BACK ISSUES AND INDICES

Copies of the current or prior years are available at $8 each, postpaid for members, and $10 for non-members.

Indices for five year increments of the quarterly, 1964 through 2003, are available for $5 per volume. The 2004-08 index is available in CD format only for $11 postpaid.

Orders should be sent to PO Box 352, Marietta, OH, 45750 for these items.

THE US POSTAL SERVICE DOES NOT FORWARD MEDIA MAIL! ADDRESS CHANGES - SEASONAL OR PERMANENT - REQUIRE TIMELY NOTICE TO THE SECRETARY TO ENSURE THAT YOU RECEIVE THE *S&D REFLECTOR*!

There are two classes of membership - full and family. Full membership includes the quarterly *S&D REFLECTOR*, admission to the Ohio River Museum and towboat W. P. SNYDER, JR. at Marietta, and voting rights at the Annual Meeting. Family members enjoy all privileges except the *REFLECTOR*.

DUES

FULL MEMBER - $30 each
FAMILY (spouses and children under 18) - $1 each
Please list full names of family members.

Remit to:
Sharon Reynolds
1002 Oakland Drive
Paragould, AR 72450

Getting Posted Up

Celebrating Two Landmark Anniversaries

It is a rare occurrence indeed when river enthusiasts are able to observe two significant anniversaries within a month of each other. Yet such an opportunity will take place later this year when river fans gather to celebrate two notable milestones. The first occurs during the weekend of September 12-13 at Marietta, OH, when Sons and Daughters of Pioneer Rivermen will observe the seventy-fifth anniversary of the organization's founding. We invite you to peruse the festivities planned for that gala weekend detailed on page 3 of this issue, and hope you are able to accept the hearty invitation of the officers, Board of Governors, and your editor to come and share in this most special occasion. Capt. Bill Judd, S&D stalwart and longtime member, drafted a brief narrative of S&D's history several years ago. Although Bill's historical synopsis appears on our website, we think it appropriate to extract a few paragraphs from his reflections and share those beginnings with you.

"The beginning of S&D was conceived by a 43-year old school teacher from Clarington, OH, Elizabeth 'Lizzie' Litton. Elizabeth was daughter of Capt. Walker Litton and sister of Capts. Grover, Hazel and Homer Litton. She enlisted the help of her neighbor, friend and school principal, J. Mack Gamble, who came up with the name Sons and Daughters of Pioneer Rivermen. Miss Litton's idea was for a yearly get-together, much like a typical family reunion. Luckily, the group early on recognized the need to expand far beyond just river families. Early by-laws said 'membership is open to all persons related to river pioneers *and others who by occupation or interest are desirous of having membership.*' Over the years that humble membership requirement has evolved into today's statement found in each Reflector: the only requirement for membership is an interest in river history.

"An organizational meeting was held June 3, 1939 at the Hotel Lafayette in Gallipolis, OH (yes, in Gallipolis!) A motion was made to organize and officers elected were J. Mack Gamble, president; Capt. Phil Elsey, vice president; Elizabeth Litton, secretary; and Ben Richardson, treasurer. A second organizational meeting was held September 10, 1939 at the Lafayette Hotel in Marietta, where J. Mack Gamble was directed to write a constitution and apply for a charter. It's rather important to note that Capt. Fred Way, Jr. was not at either of these two meetings. Most of us associate Capt. Fred with the beginning, but such was not the case. He was trying to make a living and support his family at the time by piloting the big excursion steamer ST. PAUL.

"The first Annual Meeting was held November 18, 1939 at the Lafayette in Marietta in the hotel's old Riverview Room. The program consisted of songs by river pilot Capt. W. C. "Bill" Dugan. Addresses were made by Capt. Way on the need for a river museum; by attorney J. W. Devol on early history of Ohio River steamboats; and Capt. C. W. Stoll on steamboats. A highlight of the meeting was the blowing of a Pittsburgh harbor salute by the steamer D. W. WISHERD, Capt. Charles Litton, master."

The second milestone, of course, is the 100th anniversary of the IDLEWILD/AVALON/BELLE OF LOUISVILLE, commemorated October 14-19 on the Louisville riverfront. Our September Reflector will spotlight the veteran steamboat.

S&D Regional Chapters

Ohio - Kanawha Rivers Chapter
Jim Bupp, President

Middle Ohio River Chapter
Frank X. Prudent, President

Mississippi River Chapter
Capt. Tom Dunn, President

Adjunct Organizations

Ohio River Museum, Marietta, OH
601 Front St • (740) 373-3750

Inland Rivers Library, Cincinnati, OH
800 Vine St • (513) 369-6957

Blennerhassett Museum, Parkersburg, WV
137 Juliana St • (304) 420-4800

Weblinks available at www.s-and-d.org

Meet Our Contributors

Dan Lewis *(A Breath of Fresh Steam, p. 8)* spent his early childhood around Cincinnati where it wasn't hard to develop an association with river life. His education in steamboats began when one of his earliest childhood memories was running across the decks of the newly inaugurated steamer NATCHEZ and begging his mother for food from the concession stand. Being a Cincinnati boy, Dan also rooted for the DELTA QUEEN when the news reported her races with BELLE OF LOUISVILLE.

By the time he began high school, Dan's family had moved to Louisville. His first year there he met the BELLE up close and personal when his family rode on a packed fall cruise through McAlpine Locks. It took some time to develop a fondness for the boat because he was still a Cincinnati boy rooting for the DELTA QUEEN.

While a high school senior, a friend urged Dan to answer a flyer from the BELLE recruiting crew for the coming spring. This sounded much more appealing than his current job standing over a hot grill. He started on the BELLE that spring firing her boilers on evening trips. Being the person who produced the boat's steam, he thought this was one of the coolest and most important jobs on the boat! He loved listening to colorful stories from her veteran crew members like Chief Mike Pfleider, the Chief Dan worked with most, and Capt. Mike Fitzgerald whenever he made his rounds during the trips to check on his crew.

Even though Dan was attending Indiana University with hopes of teaching history, Capt. Fitzgerald encouraged him in those first few seasons to use his time on the BELLE to get an engineer's license. All of his summers were spent aboard, except for one when he took classes. When finished with his degree and while searching for a teaching job, Capt. Fitzgerald gave Dan a call to say that he had a job on the BELLE if he wanted it. Dan couldn't resist! That was in 2000. He met and married his lovely wife Kelley (a new deckhand that season) in the summer of 2001. He has been full time on the BELLE since. In 2003 Dan sat for his first license. In 2008 he became good friends with Phillip Johnson, renewing his relationship with the DELTA QUEEN on many trips to her new berth in Chattanooga to do maintenance. He spent the 2012 season helping AMERICAN QUEEN's crew bring her back into service, while he was able to sail thousands of miles to upgrade his license. Dan returned to the BELLE in the fall of 2012, ready to help her cel;ebrate her upcoming centennial year.

John H. White, Jr. *(1831-40 Western Rivers Steamboats – Part 3, p. 16)* brings us to the end of the third decade of early steamboats in this installment of his comprehensive listing. He also shares with us a look back at the Cincinnati riverfront during those early years in his letter on page 49.

Jerry Canavit *(The Fast Boats, p. 32),* a native of Rock Island, IL, served four years in the U. S. Air Force, after which he was graduated from University of Texas at Austin. Now a retired advertising agency director, he lives in San Antonio with his wife Dawn, a retired elementary school teacher. Jerry met Doc Hawley on the AVALON's annual tramp trip to Rock Island in the summer of 1957, and after spending a weekend with Doc, Capt. Ernie Wagner and the crew, he was hooked on the old boats. He observes that "sometimes it is amazing how a short encounter with someone can have so much influence on a person — sometimes people just 'connect'."

Jerry has been researching and writing about steamboats since that time, with articles appearing in *Steamboat Bill*, *The Sea Chest*, *The Porthole*, *The Scuttlebut*, *Egregious Steamboat Journal*, *River Ripples,* and the *Reflector*. He credits Capt. Fred Way and Alan Bates as writing mentors whom he frequently pestered when beginning this life-long hobby. After about three months of phone calls and many letters to Capt. Way, this article began to take shape, some of its commentary coming directly from their correspondence. After finishing a first draft, Jerry mailed a copy to Alan Bates, asking him for a critique. He recalls, "I certainly received one, as my paper was returned to me twice with more mark-ups and comments than I ever received from my professor in English literature class."

High Water Delays W. P. SNYDER's Arrival at ORM Landing

High water on the Muskingum delayed the scheduled May 8 arrival of W. P. SNYDER, JR. from Amherst Madison's drydock in Point Pleasant back at her landing adjacent Ohio River Museum. The current river stage prohibits the boat from clearing the Putnam Street Bridge. Although the SNYDER was held up at the Muskingum River mouth just over the bank from Lafayette Hotel pending a lower pool stage, Ohio Historical Society hosted a planned luncheon recognizing all who took part in the recent renovation.

On hand representing S&D were Board of Governors chair Lee Woodruff and S&D vice president Vic Canfield, joined by Bee and Woody Rutter. Vic presented a plaque to Charles Jones for his continued support and work on restoring the SNYDER. OHS hopes to be able to take the boat to Louisville in October for the BELLE's centennial observance. The two sternwheelers were built within four years of each other by James Rees & Sons of Pittsburgh to the designs of Thomas Rees Tarn.

Late in April, Museum chair Bill Reynolds and Woody visited the boat after she was refloated, taking more photos of the work recently completed. We thank Bill for sending along these snapshots.

Coal bunker area with new deck plate installed.

Completed wheel painted and ready to roll. Buckets were left unpainted.

Replaced decking on forward end of boiler deck. Search lights and bell were removed and refurbished.

Boiler deck guards outside cabins with original red tile paint, formerly "red lead," same as wheel and main deck.

Starboard side of SNYDER on April 25 after she was refloated at Amherst Madison Drydock.

A Breath of Fresh Steam

by Daniel Lewis

Imagine the thousands of steamboats built in the United States! Think of the biggest, fastest, most expensive, or most ornate of these boats – names like J.M. WHITE, SPRAGUE, NATCHEZ, ROBERT E. LEE, CITY OF LOUISVILLE, or the J.S. DELUXE. Many of these boats had defining characteristics, abilities, or circumstances to place them high on the mantle of steamboat lore. None of these boats, though, will ever share an attribute we will celebrate in 2014 with the BELLE OF LOUISVILLE — sailing for 100 years! She's also doing this with the same set of steam engines she's had from the start.

Many of the readers here know the history of the BELLE's engines and have seen them in action. Being an engineer on the BELLE, there have been a few occasions when I've been caught myself in their hypnotic rhythm and thought about all of the other engineers of her many years who have also been caught in the same trance. More modern engines carry gauges to capture all of the hours of their operation, and I like to imagine that if the BELLE's engines had such a gauge, these engines would surely be in the *Guinness Book of World Records* for all of the hours they've rolled a paddlewheel! The exact age of these engines, though, has long been a mystery many of her crew has tried to solve to no avail. We do know, though, these engines have long-since passed their centennial mark, having been built before 1914.

Following my own curiosity, one of the BELLE's mates some years back called me into his office to show me an artifact he came across. It was an old Coast Guard inspection book written for the AVALON in the early 1950s. Among its specifics was the year the engines were built — 1872. It is the only clear date I've ever seen. That, though, simply led to a whole slew of questions about the origins of that date! In a phone conversation I had this winter with the one person I consider the foremost authority on the boat's long history — Captain Clarke C. "Doc" Hawley — this date even managed to pique his curiosity enough to go on a search through his own archives to find that date. Of course, I am anxiously waiting to see what he finds.

In the meantime, though, the BELLE's engineers were busy helping complete an extensive project to breathe new life into her engines. This project began with a fortuitous event late in the summer of 2012 during a tour of Louisville's waterfront given by local historian Rick Bell. After highlighting the BELLE on his tour, one of Rick's listeners became so enamored with the boat that he felt a need to make some contribution to the BELLE. It was our great fortune this listener was Rich Gimmel, president of Atlas Machine & Supply, Inc. Mr. Gimmel offered $50,000 in parts and labor to help prepare the boat's steam machinery for her centennial. Once again, the BELLE's charm worked her magic on another admirer.

Leaving it to the discretion of the BELLE's engineers to choose where to use this generous contribution, over the course of the next few months we whittled our ideas down to a handful of projects centered on her engines and paddlewheel. Now we were ready to talk to Atlas. Scheduling a visit during the BELLE's 2012/2013 layup, Atlas brought together a small team of engineers to pay us a visit on a cold day in January 2013. Jim McCoy, Steve Mattingly, and I pitched our ideas and they hit back with some rough estimates on engine, throttle, and paddlewheel bearing work. What was most encouraging was Atlas' belief in the possibility of boring the main engines in place. That would depend, though, on how "out of round" the cylinders might be. The thought of all the work and the possibility for accidental (even catastrophic) damage to these cylinders in the process left our crew more than a little anxious. Next was the added expense this could add, limiting other work. Leaving these possibilities on the table, we invited Atlas to return during our cruising season to see the engines in action.

Our next meeting brought a familiar face to the BELLE from the Atlas team. This was Mr. Rob Furlong. Atlas asked Mr. Furlong to come back from retirement to help with the BELLE's work. Jim, Steve, and I knew Mr. Furlong from some of the jobs he did for us in recent years. His history with the boat, though, went back much further. As a young man fresh from the University of Louisville's engineering school in the 1960s, Mr. Furlong's first involvement was in building a set of piston rings for the BELLE's main engines. Someone brandishing such a long history with the boat seemed to be a rare find, so we were thrilled to have him on board!

In the months before this meeting we received Atlas' quotes for our proposed work and were able to gain better focus on the work we wanted to do. As a result, our meeting with Mr. Furlong and Atlas allowed us to pinpoint which projects were feasible and hash out a schedule. Of course, the Atlas crew was able to see the BELLE's machinery in action and help whet their appetites for the work ahead. But what would that work be? Well, it came down to boring the main engines, rebuilding their pistons, and giving their throttle some well-deserved TLC. Of course, the anxiety of possibly moving the main engines to Atlas' shop still lingered, but Mr. Furlong firmly believed this work would be a great benefit to the BELLE. It is also certainly worth noting the involvement of Chief Kenny Howe by this point. As many readers already know, Chief Howe's long relationship with the BELLE, DELTA QUEEN, MISSISSIPPI QUEEN, and his many years of experience and knowledge gained on the river made him a necessity for such an endeavor.

By the end of our second meeting we had plotted a course for Atlas to start their work at the end of our cruising season. At that time, we would have the engines opened up for as long as they needed. For Atlas the work would start by taking measurements of the cylinders to decide how much metal they would have to remove from them. If the BELLE's crew were to do this, it would mean crawling through the cylinder with an inside micrometer. I can tell you this is easier said than done! What Atlas would use to do this was far from what we expected.

When they arrived in December they brought with them equipment more akin to space shuttle technology than the BELLE's 19th century engines. They brought what consisted of a one-eyed robot whose eye followed a tracking ball traveling around the inside of the cylinders through their whole length. This created an image showing each cylinder and provided different colors to show the amount of wear while mapping it on the cylinder. All in all, the cylinders were not as "out of round" as we suspected. Neither would enough metal need to be removed to warrant moving the cylinders to Atlas' shop — big relief!

Moving the cylinders, though, was not completely out of the realm of possibility because of how James Rees & Sons built them. When these cylinders were cast over 100 years ago, there were all sorts of air pockets left in the casts. That was simply the nature of the technology during the late 19th century. However, over their many decades of service, these air pockets have shown up as the pistons wear through the cylinders. These pockets were often filled in the same manner any cast material was repaired—by braising. This meant melting brass into the pockets. Even within the last ten years we've done such repairs. Newer technology, though, has given us other materials in the form of paste or putty which will harden to the strength of steel when mixed with the right catalyst. If an air pocket showed up while boring that was too large to fill, it would warrant a trip to Atlas' shop. A likely scenario at this point would be to install a sleeve inside the cylinder.

Once we were done with the measurements, the next step would be the actual boring. There was also another job beginning when Atlas had these measurements – rebuilding the pistons and throttle simultaneously with the boring. To start, Atlas needed to get the pistons and throttle into their shop, so the BELLE crew rolled them out to the wharf. Atlas soon arrived with a flatbed truck, and the crew hoisted them up onto the bed (with some help from a chain hoist) to be carted off. It's worth noting at this point these pistons are not identical. This is due to an incident early in the BELLE's arrival to her new home in Louisville. During one of her spring start-ups in the 1960s, as Chief Dave Crecelius was gingerly rolling the engines, the piston in the port engine gave its last gasp and collapsed! As a result,

a whole new piston was built—with some slight design changes (as any engineer worth his or her salt is never satisfied without making some change). The most notable change was making the piston out of a softer metal—bronze. As far as I know, the starboard piston is original.

As mentioned earlier, the throttle was also carted off to Atlas' shop. We did not give them the entire throttle valve, though, as they only needed the bonnet (top half) and globe. We also sent them the seat, as the valve's original designers had thought far enough ahead to make the seat removable from the body for eventual maintenance or replacement. I doubt, though, the valve's designers expected it to be operating this long! How long has this valve been operating? As many readers here know, this valve came from the Str. GORDON C. GREENE. This valve is most likely older than the GORDON C. GREENE, though. This I learned in a very enlightening phone conversation this winter with Capt. Doc Hawley. He related a fact you will not even find in latest publication of *Way's Packet Directory*! There's a boat in the directory called the FERD HEROLD. This boat has one striking similarity with the GCG. The engines are the same size — because they are the same engines! It is also very likely the throttle came with those engines. If we are to assume the engines and throttle were built new for the FERD HEROLD, then the throttle is, at least, from 1890!

Now, where were we? Yes, we had the pistons and throttle bonnet delivered to Atlas. Once Atlas had these, they were able to give them a close inspection to decide what they could do. In the latter half of December, Atlas' team invited us to their shop to discuss their plan. When Jim McCoy, Steve Mattingly, Kenny Howe, and I arrived we were given a grand tour of the entire facility. The next part of our visit was a presentation of the cylinder measurements and proposal for the piston reconstruction — all in an impressive graphic display. The pistons would basically be made of a softer material (similar to the bronze replacement on the port engine). The rings would also be made of a softer material to further prevent any wear on the cylinder. The piston rods would be checked for trueness, cleaned, and coated in a process similar to applying chrome plating. Once Atlas gave their proposal, we discussed any concerns we might have.

One theme became clear during this discussion: there were no blueprints or procedures for what we were doing to these engines. What engineer from James Rees could have envisioned these engines running for this long, and how much longer would they continue to run? There is no history in this country to tell us what was done for a set of steamboat engines operating this long — because no steamboat engine has ever operated for this long! And who knows how much life they have left? Countless numbers of passengers have asked me how long these engines will last. I owe my answer to the wisdom of Capt. Hawley. I tell passengers these engines will last as long as we take care of them. It's a short and simple answer but carries a lot of weight—the most sincere answer I can give!

Once we got through the holidays the actual boring of both cylinders began and only took a few weeks to accomplish. The whole process went without a hitch. No major air pockets showed up — just some small ones in the starboard piston that were easily filled with the steel putty. After the boring was finished, Atlas' two machinists ran a honing brush through each cylinder to clean it and leave a smooth surface. Meanwhile, the piston and throttle work was humming right along. The biggest time consumer, as Mr. Furlong warned, was getting the new rings fabricated by a separate company specializing in piston rings. Nearing the end of their work, Atlas invited us to their shop one more time to see some of the results. This time we saw the new rings (with an extra set we requested), a sandblasted throttle bonnet, and cylinder heads.

The throttle was also a source of curiosity for Atlas. During their work at the shop, Mr. Furlong paid us a visit to talk about a design in the throttle they couldn't quite understand. He told us they had searched high and low for anything about this valve and came up empty, which didn't surprise us. We related some of the valve's history to him to give him an idea of its uniqueness. One of its oddities that we discussed was a set of rings (similar in purpose to a piston ring) that rode on the globe as it traveled through a cylinder towards or away from the seat. What did these rings do? In looking at the globe's design, we surmised they were probably as

important in preventing the valve from leaking as the seat itself. As a result, Mr. Furlong went back to Atlas to confirm the necessity of replacing the throttle's globe rings once they rebuilt the globe.

As the project neared completion in late February, our office began ramping up a publicity release. We set a date for the first week of March. With this in mind, Atlas delivered the pistons, cylinder heads, and throttle bonnet a few days in advance. When the parts arrived, the pistons were carefully shrouded in cardboard and plastic. Once the Belle's crew brought everything on board, Chief McCoy's curiosity got the better of him and I helped him uncover the starboard piston and rod. What a wonderful piece of engineering we found underneath! I did the same to the port piston and snapped a few photos for posterity.

The day of the press release dawned clear but chilly, especially inside the BELLE. Until we get heat back into her steel, the boat's main deck can be akin to a deep freeze, which you'll certainly notice as soon as you walk across the threshold! Dressed in our usual grungy winter gear, Jim, Steve, and I set the starboard piston partially inside the cylinder, anticipating some media hounds wanting footage of us actually setting the piston in place. As the morning wore on, press and guests slowly gathered in the engine room. By 11:30 I was pleasantly surprised by a gathering of nearly 100 people! While all of the appropriate dignitaries made their media appearance, Chief Howe and I snuck over to the deck room to refill our coffee. As we sauntered back to engine room with our hot coffee, the dignitaries were finishing their pontificating and Jim, Steve, and I were pulled over to the starboard engine for our action shots! Pulled in to give us an extra hand was the BELLE's new Chief Mate — a young twenty something named Dustin Vanmeter. With Jim and Steve on the forward end and Dustin and I on the aft end, we carefully slid the piston into a well-oiled but close-fitting cylinder. As cameras hovered around I did my best to not let out any of my choice expletives while we grunted and groaned to get everything in place.

Of course, getting the piston into the cylinder and the rod mated back with the crosshead took much longer than the media and guests had patience to see to the finish, so they slowly wandered off to warmer climes. Mr. Furlong, though, was as anxious as we were to see everything fitted back in place, so he labored on with us. Much of his anxiety was relieved when the piston rod slid into the crosshead exactly on center. With the afternoon soon gathering steam and us needing to recoup ours, we left the port piston for another day. We had the same success when the port piston also slid back home. With those hurdles passed, the next one was assembling the throttle.

As Jim and Steve had to move on to some much-needed deck repairs to our wharf boat, I decided to tackle the throttle. Using a chain hoist to handle the weight, I guided the bonnet back into its proper place. Assembling the rest of the throttle went without a hitch. Once finished, I grabbed the throttle wheel and slowly drove the globe back down to its seat. When I was sure I had it seated, I started to open it back up. After only a turn, though, things ground to a halt. Wondering if I simply encountered some initial stiffness, I gave the wheel a slight pull but nothing loosened up. My next move was to drive the globe back down to its seat and try to open it again. Once more, the same result. Feeling slightly crestfallen, I realized I needed to pull the throttle back out completely to see where the problem was. Fortunately, I was able to leave much of the throttle components attached as I lifted it back out. Once I got it out, Jim helped me position the bonnet astride a set of steel sawhorses to give us a clear view of the globe. What we realized was one of the new rings cleared the guiding cylinder but sprung out as the globe reached its seat. On its way back up, the new ring would catch the mouth of the cylinder. The only solution we could find was to remove this lower ring. Once we reassembled the throttle, we were relieved to spin it open with the same smooth familiarity. The next time we met Mr. Furlong we explained the dilemma to him, but he assured us the loss of one ring shouldn't make any significant difference in the throttle's sealing capability.

This was verified during our next inspection, the boiler's hydrostatic test. This basically consists of filling the boiler, steam drum, and main steam line full of water until it spits out of a small bleeder valve atop the main steam line. Then a pump brings the pressure up to 1.5 times the boiler's MAWP

(maximum allowable working pressure) of 200 psi. This means 300 psi for this test. The main steam line, though, only needs to go 1.25 times the MAWP. Considering the abusive effects of pumping raw river water through this boiler, she manages to remain fairly tight. The weakest link in previous years, was the throttle. Not this year! With a successful hydrostatic test under our belts, the next big step was one the crew were eager for after a long, cold winter — raising steam!

Sparing my audience most of the inane details of raising steam, it actually takes a couple of days of low fire to finally see that first breath of steam leave the main steam line's bleeder valve. I usually catch the scent, though, before I see any steam. Yes, I can tell you the BELLE's steam has its own unique scent! Witnessing steam being brought up on two other boats—the AMERICAN QUEEN and DELTA QUEEN — I can tell each boat has its own unique scent, but I recognize it in all of them as the presence of steam. Once the steam pumps were put through their paces, it was finally time to give the main engines their due. With the cylinder and valve drains opened up, I gingerly opened the throttle just enough to let a small amount of steam weep through the cylinders and start warming the cylinder walls. While patiently watching the drains purge condensate, I grabbed an oil can and liberally squirted the usual spots and added some to the crosshead slides. As steam starts to make its wistful appearance from the drains, we walked around the engines laying our hands on the cylinders to feel where the steam's warmth was leaving its mark. It's always a comforting feeling for me to get that first sensation of warmth through my hands as I lay them on the engines, experiencing a great satisfaction at throwing warmth up against winter's cold breath!

Once I was satisfied with the quality of steam coming from the drains and the heat radiating from the engines was well beyond what I needed to touch with my hands, it was time to see the results of Atlas' work. Throwing the levers on the ship-up jack a few times to wake it up, I hoisted the jack's upper lever to release the tension on the intake valve chains and let the intake valve arms drop down to their wipers and do their voodoo! With my hands on the throttle, I gave the wheel a slight bump to open it and patiently watched the engines. A few more slight bumps gave the piston rods a slow but steady movement. As the paddlewheel made its first revolution of the season, no sound except the chuff of steam passing through the engines could be heard — absolute silence compared to so many start-ups in the past. After a long cold winter, there was almost a sense of disbelief these engines were rolling that paddlewheel again — it was really happening!

It's difficult for me, though, to accurately describe the sense of relief we felt to see these engines roll over so easily after seeing their guts splayed over the BELLE's decks all winter. Now it was a matter of time, taking as much as possible to roll these engines and thoroughly break them in before we left the wharf for the first time. After an hour of running, though, there was a slight knock in the port cylinder. Giving the cylinder a few extra pumps of cylinder oil did not stop the noise. But increasing the pressure did not increase the noise either. For all I was able to discern, this noise was inside the cylinder — not bouncing around from some outside piece. Noises can ricochet around this engine room and have you chasing your tail in endless frustration! After a few days of running we realized it was time to call in Mr. Furlong, as we knew he was as eager to see these engines in action as we were and could help us pinpoint this noise.

Once Mr. Furlong arrived, we soon found him walking around the port engine trying to isolate the source. He also believed the cylinder was where the noise originated. He called back one of the two machinists responsible for the cylinder boring to get his thoughts. This machinist, Matt, came to the same conclusion, even though he believed the boring process should have left no bumps. With the initial "shakedown" cruise for the Coast Guard inspectors approaching within a few days, we had to decide whether this noise warranted rescheduling our inspection cruise. Cancelling and rescheduling was no easy feat with the Coast Guard. Of course, the BELLE's master, Capt. Mark Doty, was brought into the discussion at this point. We all felt that we could weather the noise through the inspection, if necessary, and have time afterwards to deal with it in earnest.

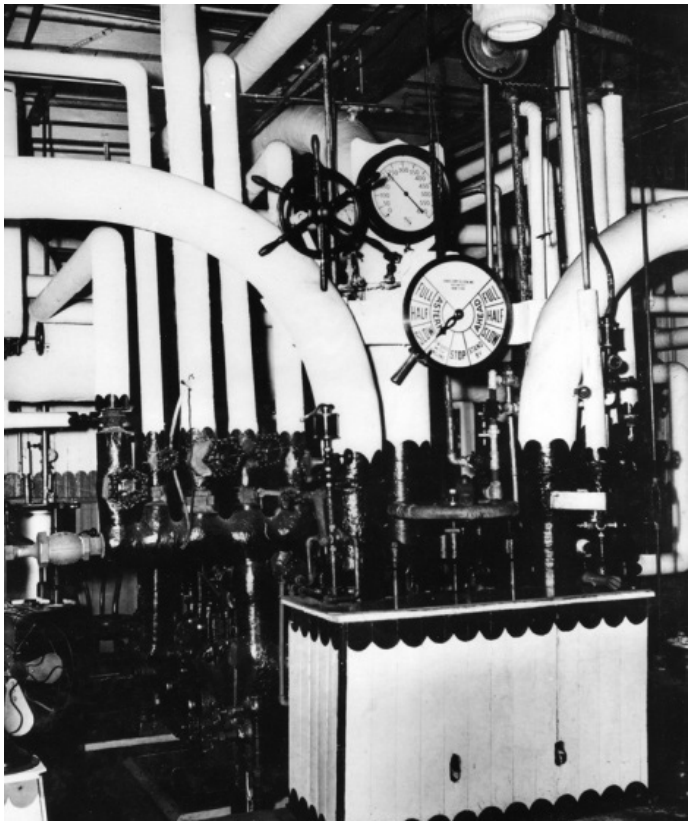
While Mr. Furlong was content with our

decision, he was anxious to deal with this noise. Keep in mind this discussion was on Thursday afternoon and our inspection was on the following Wednesday. As a result, the first thing we did was set the port piston as far aft as we could. Then we pulled the forward cylinder head off and left it open overnight to cool down enough to crawl in the cylinder to the location of the noise (about midway through). When Matt tried to crawl in Friday morning, though, the cylinder was still holding enough heat to make it a short trip inside. However, he was able to feel the cylinder wall well enough to discern a small ridge around the belly in the suspect location. By Matt's reckoning this ridge was a mere .002 inches! With the amount of "forgiveness" these engines were known to have, it was hard to believe such a small bump would cause any noise. But we were dealing with much tighter clearances now. What was the solution? Simply sand the ridge out. The cylinder needed to be much cooler to do this, so we decided to give it the weekend with a set of fans blowing on it to make it tolerable — as tolerable as being inside a 16 inch cylinder can be!

By Monday, Matt was able to crawl back in with relative ease. With another machinist in tow, Matt quickly sanded the ridge and the two ran the honing brush back through for good measure. Steve and I then bolted the cylinder head back on in short order. With this done, we cracked the throttle open and patiently waited for the engines to warm up. In what seemed an eternity, the ship-up jack lever was thrown up and the engines soon started their roll. With our ears to the port cylinder, no one discerned any of the noise we suspected — success! With handshakes all around, Atlas' machinists gathered their tools and we invited them and Mr. Furlong back for our shakedown cruise.

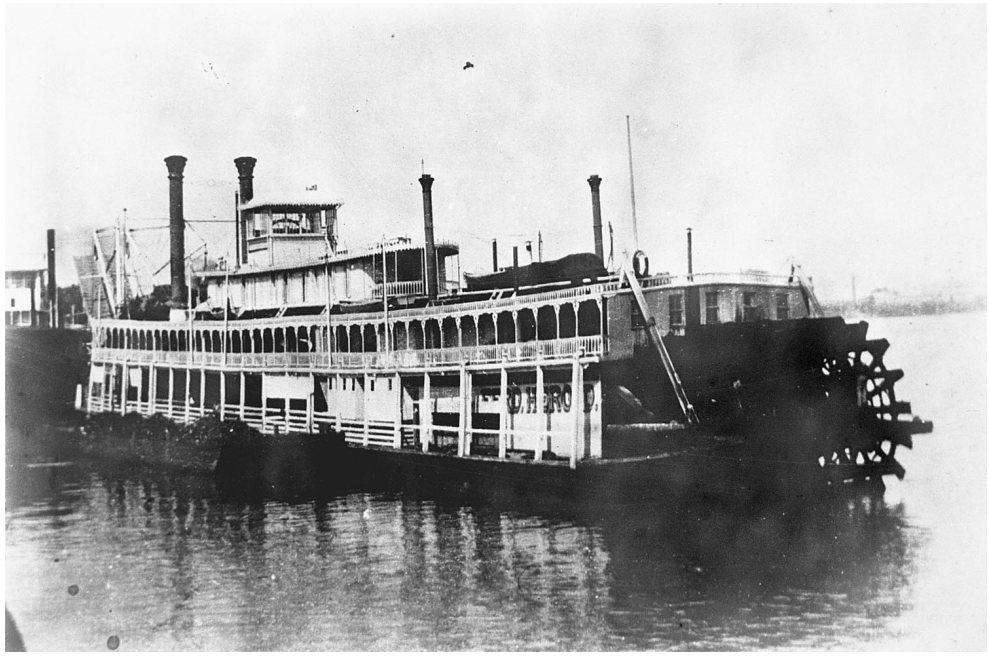
With Atlas' president Mr. Gimmel, his son, his grandson, Mr. Furlong, and a few other Atlas crew on board, we left the 4th Street wharf for our "shakedown" inspection cruise. Before we let the lines go, I had a chat with Capt. Pete O'Connell who would be doing much of the piloting during the inspection, to get on the same page with how we would set the throttle. We agreed to go with our traditional settings to get a benchmark for how these engines would act. We were pleasantly surprised to see the engines move the BELLE's paddlewheel with a vim and vigor none of us had ever seen as we maneuvered the boat through Louisville harbor with relative ease!

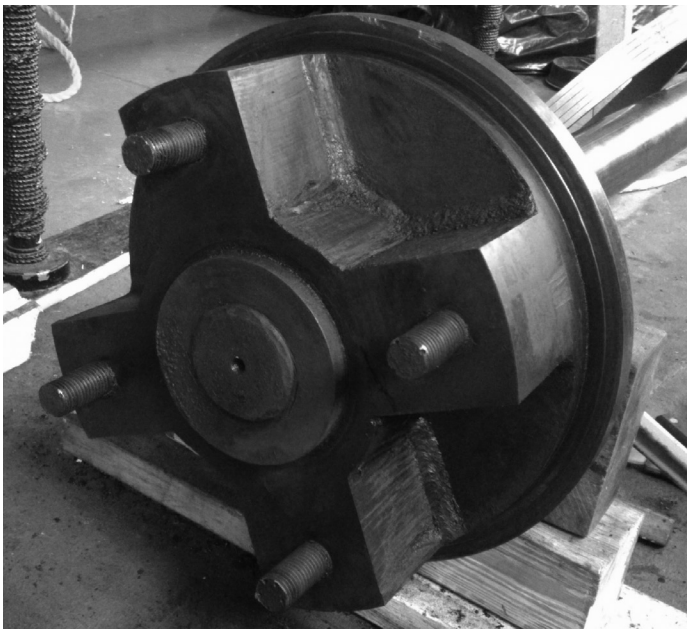
As I type out these last few sentences, the BELLE has gotten a few cruises under her belt, including the eagerly-awaited Great Steamboat Race with the BELLE OF CINCINNATI to start out her centennial season. Even though I was manning the burners in the boiler room during the race, I could hear the BELLE's engines churning up the muddy Ohio River with renewed vigor to give us a well-deserved win! As an engineer, it's hard to imagine any birthday present as worthy of her 100th year than seeing her much older steam engines receive the attention Atlas lavished on them. Given the thousands of steamboats once plying our inland waters, it's left to a handful today for us to appreciate, and our BELLE OF LOUISVILLE is the Grande Dame of them all—with a set of steam engines worthy of her place in history!



Telegraph and throttle in engineroom of GORDON C. GREENE. The telegraph is immediately recognizable as that in the BELLE's engineroom, having been transferred over to the AVALON around March 1954 at Owensboro. If the throttle was transferred as well, as seems likely, then it indeed came from the GORDON, ex-CAPE GIRARDEAU, and originally on FERD HEROLD. Photo courtesy of Public Library of Cincinnati and Hamilton County.

On the trail of the BELLE's throttle and engines. Shown at right above is FERD HEROLD (2039), built 1890 by Iowa Iron Works of Dubuque, IA for $75,000 for St. Louis brewer Ferd Herold. Her steel hull measured 244.6 x 34 x 7.2 and her three boilers powered engines 18's - 8 foot stroke. She ran St. Louis to lower Mississippi, Ouachita River, and St. Louis-Alton before Lee Line bought her for St. Louis-Memphis trade. She was dismantled in 1919, probably at St. Louis. Howard Shipyard used her engines in 1923 for Eagle Packet Co.'s new CAPE GIRARDEAU, and so it is probable that her throttle and some other machinery were also placed aboard, which may eventually have found their way to the AVALON 31 years later. Ernie Meyer had already bought the GORDON's three boilers, pumps, furnishings, dishes and the like. The seemingly unsolvable mystery is the origin of the BELLE's engines. A tantalizing partial glimpse of another steamboat (possibly a pool towboat) landed alongside the IDLEWILD while nearing completion at the Rees Allegheny boatyard in 1914 raises the question whether this unknown boat may have been their source, but then again, maybe not! Top photo from Murphy Library, UW - La Crosse; bottom photo from editor's collection.

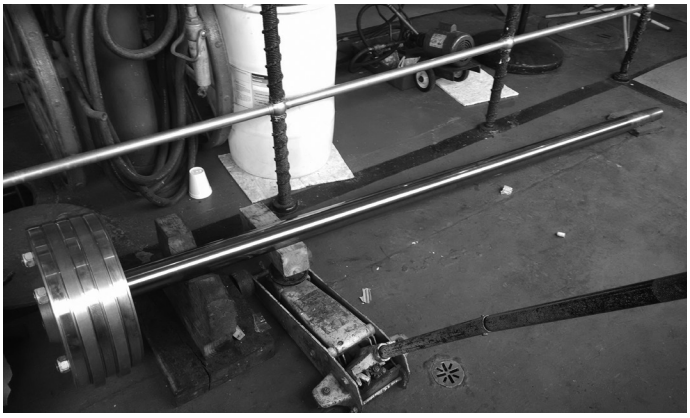


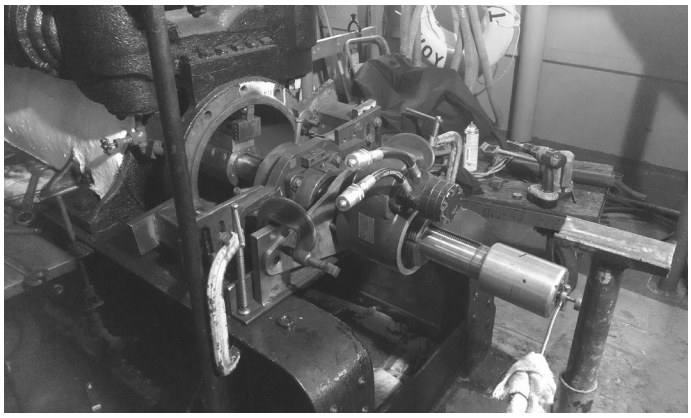


Port piston with rings, ring collar and end plate removed. This is the replacement piston which was manufactured in the 1960s.

Starboard piston with endplate and bolts removed. This is probably original with the boat. Both photos by Dan Lewis.

Upper left: *Capt. Wagner at AVALON's telegraph from GORDON C. GREENE. Photo from editor's collection.*
Middle left: *New port piston and rod.*
Bottom left: *Close-up of new port piston and interior cross from original piston.*
Upper right: *BELLE's port piston and rod before construction.*
Middle right: *BELLE's starboard engine with new piston and rings fitted.*
Bottom right: *Port engine with Atlas Machine & Supply Company's boring machine. Photos courtesy of Dan Lewis.*





1831-1840 Western Rivers Steamboats (Part 3)

by John H. White, Jr.

O. HASH
SW packet wh b. St. Louis, MO, 1839. 30 tons.

O. K.
SW packet, wh b. Smithland, KY, 1840. 282 tons. Renamed BELLE OF MISSISSIPPI.

OCEAN
SW packet, wh b. Jeffersonville, IN, 1840. 111 tons.

OCEANA
SW packet, wh b. Pittsburgh, PA, 1834. 286 tons. Off records in 1837.

OCEOLA
SW packet, wh b. Pittsburgh, PA, 1836. 105 tons.

OCOHOMA
SW packet, wh b. Portland, KY, 1835. 100 tons. Snagged in 1836.

OCONEE
SW packet, wh b. Pittsburgh, PA, 1837. 115 tons.

OCONEE
SW packet, wh b. Shousetown, PA, 1838. 115 tons. Probably same boat as previous listing.

O'CONNELL
SW packet, wh b. Elizabethtown, PA, 1833. 36 tons. The first bishop of Dubuque, IA, the Rev. Matthias Loras, arrived in the Key City aboard O'CONNELL on April 18, 1839. The steamer was advertised as a St. Louis-Galena-Dubuque-Potosi packet in 1835.

O'CONNELL
SW packet, wh b. Pittsburgh, PA, 1833. 107 tons. Snagged at Trinity, KY in July 1836.

OCRAN
SW packet, wh b. Jeffersonville, IN, 1840. 111 tons.

ODESSA
SW packet, wh b. Pittsburgh, PA, 1839. 61 tons.

OHIO
SW packet, wh b. Pittsburgh, PA, 1831. 100 tons.

OHIO
SW packet, wh b. Pittsburgh, PA, 1832. 273 tons.

OHIO BELLE
SW packet, wh b. Cincinnati, OH, 1839. 295 tons. Off records in 1840.

OHIOAN
SW packet, wh b. Pittsburgh, PA, 1833. 104 tons. Burned at Ochesee, FL in April 1836.

OLIVE BRANCH
SW packet, wh b. Elizabethtown, PA, 1833. 76 tons. She was in the Galena trade in 1834 and Galena-Dubuque 1836. She ran to St. Peter's and Minnesota Rivers in 1837.

OMEGA
SW packet, wh b. Pittsburgh, PA, 1840. 145 tons. 142' 10" x 21' 6". Built for John Jacob Astor's American Fur Company and ran on Upper Mississippi, St. Peter's and Missouri Rivers. In 1843 she took John J. Audubon and a group of naturalists up the Missouri. Off records in 1849.

ONTARIO
SW packet, wh b. Pittsburgh, PA, 1836. 134 tons. Snagged in 1839.

OPHELIA
SW packet, wh b. Cincinnati, OH, 1832. 110 tons. Snagged at Tuscaloosa, AL in 1838.

ORIAN
SW packet, wh b. Pittsburgh, PA, 1836. 66 tons.

ORIOLE
SW packet, wh b. Cincinnati, OH, 1840. 110 tons.

ORION
SW packet, wh b. Marietta, OH, 1832. 85 tons. Off records in 1836.

ORLEANS
SW packet, wh b. New Albany, IN, 1831. 326 tons. Off records in 1838.

ORLEANS
SW packet, wh b. Pittsburgh, PA, 1839. 89 tons.

ORONOKO
SW packet, wh b. Freedom, PA, 1837. 300 tons. Burned at New Orleans, LA in October 1842.

OSAGE
SW packet, wh b. Morgantown, VA, 1832. 90 tons. Flue collapsed April 21, 1835. Many were killed or injured.

OSCAR
SW packet, wh b. New Albany, IN, 1839. 65 tons.

OSCEOLA
SW packet, wh b. Pittsburgh, PA, 1836. 102 tons.

OSCEOLA
SW packet, wh b. Buffalo, VA, 1838. 94 tons. Off records in 1844.

OSCEOLA
SW packet, wh b. Pittsburgh, PA, 1839. 332 tons. Off records in 1845.

OSWEGO
SW packet, wh b. Marietta, OH, 1835. 117 tons. Snagged at Carrollton, KY in February 1839.

OTAGGO
SW packet, wh b. Evansville, IN, 1835. 95 tons.

OTHELLO
SW packet, wh b. Brownsville, PA, 1836. 84 tons. Collided with PERU (see) at Rome, IN in March 1839.

OTSEGO
SW packet, wh b. Evansville, IN, 1835. 95 tons. Possibly same boat as OTAGGO above.

OTTAWA
SW packet, wh b. Ottawa, IL, 1833. 25 tons. Snagged at Pine Bluff, AR in May 1834.

OTTER
SW packet, wh b. Cincinnati, OH, 1840. 92 tons. 128' x 18' x 4' 3". She had a single engine and was built by Capt. Daniel Smith Harris for the Galena-St. Paul trade 1841-47. She cost $12,000. Her crew included Capt. Harris as master, along with his brother Capt. Scribe, Meesha Harris as engineer, and brother Jack as bartender. She was built to compete with boats owned by the American Fur Company. OTTER collided with ATLAS in fall 1846. She was sold in 1848 and sank on Wisconsin River in 1849. Her engines were placed on TIGER.

OTTO
SW packet, wh b. Jeffersonville, IN, 1831. 163 tons. Sank in collision on Lake Pontchartrain, LA in January 1836.

OUACHA
SW packet, wh b. Cincinnati, OH, 1832. 37 tons.

OUACHITA
SW packet, wh b. Cincinnati, OH, 1832. 162 tons.

OZARK
SW packet, wh b. Cincinnati, OH, 1837. 139 tons. Snagged in 1840.

OZARK
SW packet, wh b. Cincinnati, OH, 1838. 99 tons.

P. MILLER
SW packet, wh b. Pittsburgh, PA, 1838. 153 tons. Snagged on Red River, LA in March 1842.

PALMYRA
SW packet, wh b. Freedom, PA, 1836. 101 tons. 129' x 17' 4" x 5'. She had a single engine, transom stern and a cabin above deck. Her owner and master was Capt. George B. Cole. She was the first steamboat known to ascend the St. Croix River. Stranded at Rock Island, IL in November 1838.

PANOLA
SW packet, wh b. Cincinnati, OH, 1839. 136 tons. Snagged at Bayou Pigeon, LA in June 1842.

PARAGON
SW packet, wh b. Ripley, OH, 1831. 89 tons.

PARAGON
SW packet, wh b. Jeffersonville, IN, 1839. 263 tons.

PARIS
SW packet, wh b. Pittsburgh, PA, 1837. 131 tons.

PASSENGER
SW packet, wh b. Smithland, KY, 1835. 157 tons.

PATRICK HENRY
SW packet, wh b. Cincinnati, OH, 1835. 115 tons.

PATRICK HENRY
SW packet, wh b. Cincinnati, OH, 1837. 93 tons.

PATRICK HENRY
SW packet, wh b. Cincinnati, OH, 1840. 161 tons. Sank at Algiers, LA in February 1850.

PAUL CLIFFORD
SW packet, wh b. Cincinnati, OH, 1831. 100 tons. Collided with MISSOURIAN (see) at Tunica, MS in October 1833.

PAUL JONES
SW packet, wh b. Cincinnati, OH, 1834. 170 tons. Sank in deep water at Comb's Landing on Tennessee River, 70 miles below Florence, AL in 1840. The boat and cargo were a total loss.

PAUL PRY
SW packet, wh b. Kanawha River, 1837. 45 tons.

PAUL PRY
SW packet, wh b. Cincinnati, OH, 1838. 34 tons.

PAULINE
SW packet, wh b. Pittsburgh, PA, 1839. 53 tons.

PAVILION
SW packet, wh b. Pittsburgh, PA, 1836. 83 tons. She had a single engine. Capt. James R. Lafferty ran her in Galena-St. Peter's trade. In summer 1837 Indian agent Lawrence Talliaferro (who was also a passenger on VIRGINIA's pioneer trip to the Falls of St. Anthony in May 1823) chartered her to transport a Dakota delegation from the St. Peter's to Pittsburgh to sign a treaty in Washington. In fall 1837 she ascended the Des Moines River up to Fort Dodge, IA.

PAWNEE
SW packet, wh b. Pittsburgh, PA, 1835. 198 tons. Snagged in 1838.

PEARL
SW packet, wh b. Cincinnati, OH, 1837. 97 tons.

PEKIN
SW packet, wh b. Pittsburgh, PA, 1838. 104 tons.

PENNSYLVANIA
SW packet, wh b. Pittsburgh, PA, 1837. 134 tons. Although she was an Ohio River packet, PENNSYLVANIA made an upper Mississippi inspection tour of western Army fortifications, arriving at Fort Snelling from Pittsburgh on June 1, 1839. Off records in 1842.

PENNSYLVANIAN
SW packet, wh b. Pittsburgh, PA, 1836. 323 tons.

PENSACOLA
SW packet, wh b. Wheeling, 1839. 140 tons. Snagged at Smithland, KY in November 1841.

PEORIA
SW packet, wh b. Elizabethtown, PA, 1832. 78 tons. Snagged in 1834.

PEORIA
SW packet, wh b. Pittsburgh, PA, 1839. 161 tons.

PERSIAN
SW packet, wh b. Cincinnati, OH, 1836. 430 tons.

PERU
SW packet, wh b. Pittsburgh, PA, 1836. 202 tons.

PERUVIAN
SW packet, wh b. Pittsburgh, PA, 1831. 226 tons.

PHENIX
SW packet, wh b. Algiers, LA, 1837. 420 tons. Possibly spelled PHOENIX.

PHILADELPHIA
SW packet, wh b. Wheeling, 1835. 102 tons.

PHILADELPHIA
SW packet, wh b. Marietta, OH, 1835. 115 tons.

PHILIPPE
SW packet, wh b. New Orleans, LA, 1839. 45 tons.

PICAYUNE
SW packet, wh b. Smithland, KY, 1840. 79 tons.

PIKE
SW packet, wh b. Pittsburgh, PA, 1838. 26 tons.

PIKE
SW packet, wh b. Brownsville, PA, 1838. 90 tons. Snagged in 1840.

PIKE
SW packet, wh b. Jeffersonville, IN, 1838. 294 tons. 175' x 25' x 7'. Her first home port was Cincinnati. Often confused with GENERAL PIKE (see). She arrived at Fort Snelling on September 9, 1839 from Covington, KY, carrying 80 recruits. PIKE returned a week later with another 100 troops from Prairie du Chien. Off records in 1845.

PILOT
SW packet, wh b. Pittsburgh, PA, 1836. 128 tons. Snagged at Tuscaloosa, AL in May 1839.

PILOT
SW packet, wh b. Pittsburgh, PA, 1839. 128 tons. Possibly same boat as previous listing.

PIONEER
SW packet, wh b. Pittsburgh, PA, 1835. 112 tons.

PIONEER
SW packet, wh b. Pittsburgh, PA, 1835. 139 tons. Probably same boat as previous listing.

PIRATE
SW packet, wh b. Pittsburgh, PA, 1838. 128 tons. Snagged on Missouri River in August 1839.

PIRATE
SW packet, wh b. Louisville, KY, 1839. 23 tons.

PITTSBURGH
SW packet, wh b. Pittsburgh, PA, 1831. 100 tons. Lost in ice at Pittsburgh in January 1832.

PITTSBURGH
SW packet, wh b. Pittsburgh, PA, 1836. 144 tons. Snagged at Baton Rouge, LA in January 1838.

PIZARRO
SW packet, wh b. Cincinnati, OH, 1839. 107 tons. 133' x 20'. She was built for Galena's Harris family as an upper Mississippi packet. She cost $16,000 and was described as "commodious." PIZARRO was the first steamer to carry a fire pump and hose attached to her main engine. Nevertheless, she burned at St. Louis in December 1839.

PLANTER
SW packet, wh b. Pittsburgh, PA, 1831. 116 tons. Lost in 1836.

PLANTER
SW packet, wh b. Pittsburgh, PA, 1833. 107 tons.

PLATTE
SW packet, wh b. Freedom, PA, 1839. 160 tons. Snagged at Thebes, IL in September 1841.

PLOUGH BOY
SW packet, wh b. Louisville, KY, 1833 or 34. 80 tons. Exploded boilers on Mississippi River in June 1837.

PLOUGH BOY
SW packet, wh b. Pittsburgh, PA, 1834. 142 tons. Snagged at Mobile, AL in January 1839.

PLOUGHMAN
SW packet, wh b. Brownsville, PA, 1834. 33 tons.

POCAHONTAS
SW packet, wh b. Louisville, KY, 1839. 150 tons.

POLANDER
SW packet, wh b. Brownsville, PA, 1831. 131 tons. POLANDER collided with HORNET (see) at Cincinnati at 8:00 p.m. on April 19, 1832. Both vessels were considerably damaged and HORNET's captain lost his life in the accident. POLANDER eventually was snagged in 1835 or 1838.

PONCHARTRAIN
SW packet, wh b. New Albany, IN, 1834. 145 tons. Snagged when new. Possibly spelled PONTCHARTRAIN.

PONCHARTRAIN
SW packet, wh b. Mandeville, LA, 1837. 190 tons. Possibly spelled PONTCHARTRAIN.

PORTSMOUTH
SW packet, wh b. Cincinnati, OH, 1832. 95 tons. Sank in Wabash River 1833.

POST BOY
SW packet, wh b. Steubenville, OH, 1833. 44 tons. Worn out in 1838.

POST BOY
SW packet, wh b. Cincinnati, OH, 1835. 95 tons. Snagged in 1838.

POST BOY
SW packet, wh b. Cincinnati, OH, 1836. 148 tons.

POTOSI
SW packet, wh b. Pittsburgh, PA, 1834. 121 tons. Snagged on Mississippi River in 1836 or 1837.

PRAIRIE
SW packet, wh b. Pittsburgh, PA, 1836. 296 tons.

PRAIRIE
SW packet, wh b. Pittsburgh, PA, 1839. 161 tons. Demolished by tornado at Natchez, MS on May 6, 1840, along with ST. LAWRENCE (see).

PRE-EMPTION
SW packet, wh b. Cincinnati, OH, 1840. 180 tons. 162' x 26' x 4' 3". This steamer was another boat built by the Harris brothers of Galena and owned jointly with merchants from St. Louis and Louisiana, MO. A second steamer of this name was enrolled at Cincinnati and St. Louis in 1844. Snagged at Commerce, MO in September 1842.

PRESIDENT
SW packet, wh b. Cumberland River, 1831. 360 tons.

PRESIDENT
SW packet, wh b. Clarksville, TN, 1831. 319 tons. Probably same boat as previous listing.

PRESIDENT
SW packet, wh b. Parkersburg, VA, 1840. 209 tons. Snagged in December 1842.

PRESIDENT
SW packet, wh b. Manchester, KY, 1840. 209 tons. Probably same boat as previous listing.

PRINCESS
SW packet, wh b. Cincinnati, OH, 1839. 216 tons.

PRINCETON
SW packet, wh b. Rockville, OH or Cincinnati, 1834. 133 tons.

PRINCETON
SW packet, wh b. Cincinnati, OH, 1838. 111 tons.

PRIVATEER
SW packet, wh b. Pittsburgh, PA, 1833. 149 tons. Snagged at Natchitoches, LA in November 1837.

PROTECTOR
SW packet, wh b. Pittsburgh, PA, 1834. 156 tons. Burned at Claiborne, AL in April 1834.

PULASKI
SW packet, wh b. Pittsburgh, PA, 1837. 44 tons. Collided with FORREST (see) in the Allegheny River twenty miles above Pittsburgh on either April 5 or May 5, 1843. Five or six passengers on FORREST were thrown into the river and drowned. At the same time, a steam pipe on FORREST burst, seriously injuring several more passengers. PULASKI sank at once to her boiler deck.

QUEEN OF THE WEST
SW packet, wh b. Cincinnati, OH, 1839. 291 tons. She made 8 round trips Cincinnati to New Orleans between February 12 and July 16, 1840. Her running time of 103 days, 6 hours averaged 250 miles a day. Her fastest round trip was 14 days, 18 hours and her slowest was 20 days. Snagged at Shawneetown, IL in 1843.

QUINCY
SW packet, wh b. Pittsburgh, PA, 1836. 117 tons. QUINCY operated in the lead trade from St. Louis with Capt. Cameron, master. She was not registered in 1838, but a steamer by that name is listed in the Galena trade in 1840.

RAMBLER
SW packet, wh b. Cincinnati, OH, 1832. 91 tons.

She burned at the Louisville landing on the evening of June 1, 1833. The fire started on SENTINEL (see) and spread to RAMBLER and DELPHINE (see). The passengers made a hasty escape, but their luggage and clothing were lost as was a large amount of cargo. The three boats were consumed in about one hour. There were another dozen steamers landed nearby but they were all saved.

RAMBLER
SW packet, wh b. Nashville, TN, 1832. 114 tons.

RANDOLPH
SW packet, wh b. New Albany, IN, 1833. 549 tons. According to *Nile's Weekly* of April 2, 1836, the boat burned near Nashville with the loss of a cargo valued at $350,000, some of it intended for President Jackson. Two or three lives were lost in the fire as well. This information conflicts with Lytle Holdkamper which lists her snagged at Carrollton, LA in March 1841.

RANGER
SW packet, wh b. Pittsburgh, PA, 1839. 34 tons.

RAPIDS
SW packet, wh b. Pittsburgh, PA, 1839. 109 tons. She ran in the St. Louis-Galena-Dubuque lead trade for Capt. Kennett in 1840. RAPIDS was caught in ice at Bloomington, IA in March 1840. Off records in 1843.

RAPPAHANNOCK
SW packet, wh b. Louisville, KY, 1838. 166 tons.

RARITAN
SW packet, wh b. Sharpsburg, PA, 1840. 138 tons. Ran on Upper Mississippi for Capt. Rogers and was at Galena in 1846. Off records after 1846.

REAPER
SW packet, wh b. Cincinnati, OH, 1831. 126 tons. Snagged on Tennessee River in January 1832.

RED ROVER
SW packet, wh b. New Albany, IN, 1840. 381 tons.

REINDEER
SW packet, wh b. Brownsville, PA, 1831. 98 tons. Burned at New Albany, IN in August 1833.

REINDEER
SW packet, wh b. Brownsville, PA, 1834. 104 tons. Burned at Point Pleasant, LA in January 1837.

RELIANCE
SW packet, wh b. Cheat River, PA, 1833. 70 tons.

RELIANCE
SW packet, wh b. Wheeling, 1837. 145 tons.

RELIEF
SW packet, wh b. Cincinnati, OH, 1838. 78 tons. RELIEF was a low water boat built by the Harris brothers to run along with their SMELTER (see). She was advertised for the Upper Mississippi and Rock Rivers in 1838. Off records in 1842.

RELIEF
SW packet, wh b. Portsmouth, OH, 1840. 90 tons.

RENOWN
SW packet, wh b. Rising Sun, IN, 1837. 163 tons. Snagged below Moore's Bluff in February 1841.

REPORTER
SW packet, wh b. Steubenville, OH, 1836. 134 tons. Worn out in 1842.

REPUBLICAN
SW packet (?), wh b. Beaver, PA, 1833. 21 tons.

RESERVE
SW packet, wh b. Wheeling, 1837. 115 tons. Stranded at Tompkins Bluff, AL in May 1842.

RETURN
SW packet, wh b. Pittsburgh, PA, 1832. 126 tons. Snagged at Princeton, MS in October 1834.

RETURN
SW packet, wh b. Cincinnati, OH, 1838. 56 tons.

REVENUE
SW packet, wh b. Louisville, KY, 1834. 122 tons. She left New Orleans with LAMPLIGHTER (see) and MAJESTIC (see) on August 21, 1836, carrying a large number of Indians being moved to Fort Gibson, OK for resettlement. Worn out in 1840.

RHINE
SW packet, wh b. Freedom, PA, 1838. 118 tons.

Snagged at Elizabeth, IL in November 1841.

RIALTO
SW packet, wh b. Pittsburgh, PA, 1840. 76 tons. Snagged at Pine Bluff, AR in November 1842.

RICHMOND
SW packet (?), wh b. New Richmond, OH, 1833. 16 tons.

RICHMOND
SW packet, wh b. Wheeling, 1838. 108 tons.

RIENZI
SW packet, wh b. Pittsburgh, PA, 1836. 173 tons. Snagged at Thebes, IL January 1841.

RIO
SW packet, wh b. New Albany, IN, 1838. 122 tons.

RISING SUN
SW packet, wh b. Lawrenceburg, IN, 1832. 38 tons. Snagged on Tennessee River in 1833.

ROANOKE
SW packet, wh b. Louisville, KY, 1834. 262 tons. Stranded at Woods Bluff, AL in January 1842.

ROANOKE
SW packet, wh b. Jefersonville, IN, 1834. 146 tons.

ROANOKE
SW packet, wh b. Grave Creek, VA, 1835. 99 tons.

ROANOKE
SW packet, wh b. Wheeling, 1835. 100 tons. Probably same boat as previous listing.

ROB ROY
SW packet, wh b. Jeffersonville, IN, 1834. 192 tons. Exploded boilers on June 9, 1836 near Columbia, AR killing 17 and injuring 14.

ROBERT EMMET
SW packet, wh b. Wheeling, 1835. 103 tons.

ROBERT FULTON
SW packet, wh b. Madison, IN, 1839. 187 tons. 157' x 22' x 5'. Built by Howard Shipyard. Snagged at Iola, FL in July 1839.

ROBERT MORRIS
SW packet, wh b. Pittsburgh, PA, 1835. 123 tons. Worn out in 1842.

ROCHESTER
SW packet, wh b. Pittsburgh, PA, 1836. 92 tons.

ROCKY MOUNTAIN
SW packet, wh b. Smithland, KY, 1836. 292 tons.

RODNEY
SW packet, wh b. Pittsburgh, PA, 1837. 99 tons.

RODOLPH
SW packet, wh b. Jeffersonville, IN, 1836. 150 tons. Snagged at New Orleans, LA in January 1849.

ROLLA
SW packet, wh b. Pittsburgh, PA, 1837. 139 tons. She carried a single engine. ROLLA was chartered at Pittsburgh by the War Department in summer 1837 to return the Dakota to their home after a treaty had been signed in Washington, D.C. She survived a flue collapse and fire in November 1837, which claimed the life of a fireman and severely injured her engineer. The boat was snagged and sank in 3 minutes on September 22, 1838, at 2:00 p.m. near Island No. 21, 120 miles south of Cairo. Passengers camped out on the riverbank for five days until picked up.

ROMEO
SW packet, wh b. New Albany, IN, 1835. 109 tons.

ROSALIE
SW packet, wh b. Pittsburgh, PA, 1839. 145 tons. She ran St. Louis-Galena trade in 1839, Capt. M. Littleton. Off records in 1842.

ROVER
SW packet, wh b. Pittsburgh, PA, 1835. 55 tons.

ROYAL
SW packet, wh b. Millsboro, PA, 1839. 68 tons.

RUBICON
SW packet, wh b. Maysville, KY, 1838. 164 tons. Snagged at Ste. Genevieve, MO in October 1841.

RUFUS PUTNAM
SW packet, wh b. Marietta, OH, 1835. 98 tons.

SAINT CHARLES
SW packet, wh b. Pittsburgh, PA, 1835. 127 tons. Burned at Lexington, MO in June 1836.

SAINT LANDRY
SW packet, wh b. Louisville, KY, 1834. 38 tons. Worn out in 1836.

SAINT LAWRENCE (or ST. LAWRENCE)
SW packet, wh b. Pittsburgh, PA, 1835. 111 tons. Was lifted many feet into the air by a tornado at Natchez, MS on May 6, 1840 and then plunged to the bottom of the river with crew, passengers and cargo. PRAIRIE (see) was landed when the storm blew in and was demolished. Her cabin was carried away leaving the machinery and hull. Capt. Frelingh and clerk James Wilson barely escaped.

SAINT LEON
SW packet, wh b. Jeffersonville, IN, 1833. 74 tons.

SAINT LOUIS
SW packet, wh b. Pittsburgh, PA, 1837. 538 tons.

SAINT MARTIN
SW packet, wh b. New Albany, IN, 1832. 143 tons. Burned at Donaldsonville, LA in October 1833.

SAINT PETERS
SW packet, wh b. Pittsburgh, PA, 1836. 119 tons. Carried a single engine. Owned by Capt. Joseph Throckmorton and Hempstead & Beebe of St. Louis, and sold to the American Fur Company. Throckmorton was her master through the fall of 1836 when he went to Pittsburgh to build ARIEL (see) and BURLINGTON (see). Capt. Chouteau took SAINT PETERS to the Missouri River in 1837 and on that trip carried smallpox to the Indian tribes at Ft. Cloud, ND. Worn out in 1838.

SALEM
SW packet, wh b. Pittsburgh, PA, 1835. 106 tons.

SALINE
SW packet, wh b. Kanawha, VA, 1837. 75 tons.

SAM
SW packet, wh b. Pittsburgh, PA, 1835. 127 tons.

SAMSON
SW packet, wh b. Cincinnati, OH, 1832. 198 tons. Burned at New Madrid, MO in June 1836.

SAMUEL J. PETERS
SW packet, wh b. Cincinnati, OH, 1839. 67 tons.

SANDUSKY
SW packet, wh b. Pittsburgh, PA, 1835. 111 tons.

SANGAMON
SW packet, wh b. Portland, KY, 1832. 103 tons. Stranded on Kent River, FL in March 1835.

SARATOGA
SW packet, wh b. Pittsburgh, PA, 1840. 130 tons. Snagged at Mound City, IL in November 1842.

SAVANNAH
SW packet, wh b. Pittsburgh, PA, 1836. 137 tons. Name possibly SAVANNA.

SCIENCE
SW packet, wh b. Frederickstown, PA, 1834. 52 tons. Her first port was Pittsburgh. During the 1837 season she made trips from St. Louis and Galena to Helena, WI on the Wisconsin River and to Fort Winnebago at Portage, WI. Off records in 1838.

SCIOTO VALLEY
SW packet, wh b. Murraysville, VA, 1840. 194 tons. Burned at Cincinnati, OH in February 1844.

SCOTLAND
SW packet, wh b. New Albany, IN, 1831. 86 tons.

SCOUT
SW packet, wh b. Pittsburgh, PA, 1831. 62 tons.

SEA GULL
SW packet (?), wh b. Warren, OH, 1833. 21 tons. Snagged at Little Rock, AR in May 1834.

SELMA
SW packet, wh b. Pittsburgh, PA, 1835. 355 tons.

SEMAPHORE
SW packet, wh b. Opalousas, LA, 1835. 106 tons. Worn out in 1843.

SENATOR

SW packet, wh b. Portsmouth, OH, 1831. 181 tons. Stranded at Sandy Island on Ohio River in January 1835.

SENTINAL
SW packet, wh b. Bridgeport, PA, 1832. 151 tons. Name possibly SENTINEL. Burned at Louisville, KY in June 1833.

SEVENTY-SIX
SW packet, wh b. Cincinnati, OH, 1830. 142 tons.

SHAKESPEARE
SW packet, wh b. New Albany, IN, 1835. 227 tons.

SHAMROCK
SW packet, wh b. Portland, KY, 1832. 219 tons. Collided with BALTIC (see) at New Orleans, LA in February 1832.

SHANNON
SW packet, wh b. Brownsville, PA, 1837. 77 tons.

SHAWNEE
SW packet, wh b. Pittsburgh, PA, 1839. 164 tons.

SHELBY
SW packet (?), wh b. ?, 1836.

SHOAL WATER
SW packet, wh b. Cincinnati, OH, 1834. 47 tons. Stranded at Troy, OH (possibly Troy, IN) in March 1837.

SHOCKONQUIN
SW packet, wh b. Jeffersonville, IN, 1839. 74 tons.

SHYLOCK
SW packet, wh b. Smithland, KY, 1837. 180 tons. Worn out in 1843.

SIAM
SW packet, wh b. Pittsburgh, PA, 1835. 127 tons. Worn out in 1841.

SIAMESE
SW packet, wh b. New Albany, IN, 1835. 46 tons.

SIGNAL
SW packet, wh b. Cincinnati, OH, 1832. 142 tons.

SIREN
SW packet, wh b. Cincinnati, OH, 1838. 110 tons. Exploded boilers on Chattahoochee River in February 1845.

SMELTER
SW packet, wh b. Cincinnati, OH, 1837. 180 tons. Built by brothers Scribe and Daniel Smith Harris, she was the fastest, largest and most luxurious boat on the Upper Mississippi in 1837. SMELTER was the first boat on the Upper with private staterooms. She was decorated with evergreens and also carried a cannon on her bow which was fired when the boat was rounding to at landings or meeting other boats, this in the days before steam whistles were carried. In 1837 she set a speed record from Galena to Cincinnati of 5 days. Off records in 1843.

SMITHLAND
SW packet, wh b. Smithland, KY, 1839. 234 tons. Snagged at Island No. 31 near Plumb Point, TN in November 1841.

SOUTH ALABAMA
SW packet, wh b. Pittsburgh, PA, 1835. 164 tons. Lost (?) in June 1842.

SOUTH WESTERN
SW packet, wh b. New Albany, IN, 1839. 202 tons.

SOUTHERNER
SW packet, wh b. Cincinnati, OH, 1836. 298 tons. Snagged at New Orleans, LA in May 1851.

SOUTHERNER
SW packet, wh b. Cincinnati, OH, 1840. 205 tons. Cost $20,000.

SOUTHRON
SW packet, wh b. Steubenville, OH, 1834. 133 tons. Sold to the War Department. Off records in 1863.

SPLENDID
SW packet, wh b. Cincinnati, OH, 1832. 354 tons. 155' x 27' x 9' hull was white oak. SPLENDID had six boilers and a single cylinder engine 29" bore by 5' 9" stroke. She was built for Capt. Levi James and was ready for her trial run March 9, 1832. A few days later she left Cincinnati for New Orleans. In spring 1836 she collided with CHAMPION (see) and was out of

service while repairs were made. Later that year she was sold to New Orleans and remained in service until 1839. See also MEDIATOR.

SPY
SW packet, wh b. Frederickstown, PA, 1832. 42 tons. Snagged on Arkansas River in 1833.

SPY
SW packet, wh b. Cincinnati, OH, 1838. 35 tons. Ran on Big Sandy River.

STAR
SW packet, wh b. New Albany, IN, 1840. 420 tons.

STAR OF THE WEST
SW packet, wh b. Cincinnati, OH, 1831. 129 tons.

STATESMAN
SW packet, wh b. Bridgeport, PA, 1831. 136 tons.

STEUBENVILLE
SW packet, wh b. Steubenville, OH, 1836. 36 tons. Worn out in 1840.

STEUBENVILLE PACKET
SW packet, wh b. Pittsburgh, PA, 1836. 45 tons.

SULTAN
SW packet, wh b. Smithland, KY, 1838. 259 tons. Also listed as built at Iron Banks.

SULTANA
SW packet, wh b. Cincinnati, OH, 1836. 385 tons. 230' x 37'. Built at Saunders Hartshorn's Yard at a cost of $60,000, one of the grandest boats of her time. She had 30 staterooms. Much of her main cabin was faced with mirrors, and this same space had a rich Turkish carpet, cut glass chandeliers, damask drapery and mahogany furniture. She drew seven feet of water which kept her at her landing several months each year. She was snagged and lost at the head of Island No. 8 near New Madrid, MO on July 29, 1839.

SUMMERVILLE (or **SOMERVILLE**)
SW packet, wh b. New Albany, IN, 1839. 358 tons. She cost $35,000. The boat was snagged on the Mississippi near the North Arkansas River in January 1840. Although she was lost, part of her cargo, her engines and furniture were salvaged.

SUN
SW packet, wh b. Pittsburgh, PA, 1831. 136 tons. Stranded at Mobile, AL in August 1840.

SUN FLOWER
SW packet, wh b. Cincinnati, OH, 1836. 70 tons.

SUNFLOWER
SW packet, wh b. Cincinnati, OH, 1836. 71 tons. Probably same boat as previous listing.

SUPERIOR
SW/Stw packet, wh b. Cincinnati, OH, 1832. 174 tons. Built with both a sternwheel and sidewheels powered by separate engines. The design was a failure and the sternwheel was removed.

SUSQUEHANNA
SW packet, wh b. Pittsburgh, PA, 1837. 138 tons.

SWALLOW
SW packet, wh b. Cincinnati, OH, 1838. 252 tons.

SWAN
SW packet, wh b. Cincinnati, OH, 1836. 112 tons. Sank on Lake Chicot, LA in April 1838.

SWAN
SW packet, wh b. Jeffersonville, IN, 1836. 198 tons. Stranded at Cloasieu, LA in December 1843.

SWAN
SW packet, wh b. Cincinnati, OH, 1840. 93 tons. Cost $12,000.

SWIFTSURE
SW packet, wh b. Cincinnati, OH, 1835. 90 tons.

SWISS BOY
SW packet, wh b. Cincinnati, OH, 1835. 121 tons.

SYLPH
SW packet, wh b. Cincinnati, OH, 1839. 65 tons.

SYREN
SW packet, wh b. Cincinnati, OH, 1838. 112 tons. Possibly SIREN (see).

TALLAHASSEE
SW packet, wh b. Elizabeth, PA, 1839. 133 tons.

TALLAPOOSA
SW packet, wh b. Cincinnati, OH, 1836. 124 tons. Worn out in 1842.

TANCHIPAHO
SW packet, wh b. ?, 1836. 120 tons.

TANGEPAHOA
SW packet, wh b. Cincinnati, OH, 1832. 60 tons. Name possibly TANGEPEHO or TANGIPAHO (see). Burned on way to Belize, Central America (former British Honduras) on March 2, 1838.

TANGIPAHO
SW packet, wh b. Cincinnati, OH, 1837. 65 tons. Burned at New Orleans, LA in March 1838. Probably same vessel as previous listing.

TARQUIN
SW packet, wh b. Cincinnati, OH, 1837. 165 tons. Also listed as built at Paducah, KY. Snagged at Princeton, MS in November 1841.

TCHULA
SW packet, wh b. New Albany, IN, 1835. 85 tons.

TCHULA (or **TSCHULA**)
SW packet, wh b. Cincinnati, OH, 1840. 203 tons. Snagged at Cairo, IL in August 1841.

TECHE
SW packet, wh b. Cincinnati, OH, 1835. 142 tons. Worn out in 1847.

TECUMSEH
SW packet, wh b. Jeffersonville, IN, 1836. 96 tons. 115' x 16' x 5'. Built by Howard Shipyard.

TELEGRAPH
SW packet, wh b. Pittsburgh, PA, 1840. 165 tons. Sold to the War Department. Off records in 1846.

TEMPEST
SW packet, wh b. Pittsburgh, PA, 1835. 105 tons. Snagged in 1838.

TENNESSEE
SW packet, wh b. Bridgeport, PA, 1836. 86 tons. She was a Pittsburgh-St. Louis packet. Running from Louisville in June 1839, she caught fire near Rome, IN, about 100 miles below the Falls City. Her cargo was gun powder, and her captain ordered the boat to be sunk, thinking he could raise and repair her. Apparently he succeeded, since TENNESSEE was chartered in April 1841 by the St. Croix Lumber Company to bring machinery and supplies to their new sawmill at St. Croix Falls, WI. Off the records in 1843.

THAMES
SW packet, wh b. Brownsville, PA, 1838. 136 tons.

TIBER
SW packet, wh b. Pittsburgh, PA, 1838. 150 tons.

TIDE
SW packet, wh b. Kanawha, VA, 1837. 99 tons.

TIGER
SW packet, wh b. Wheeling, 1837. 364 tons. TIGER was towing the barge MARCIA over the bar at Southwest Pass below New Orleans on November 13, 1844, when all six of her boilers exploded, killing three crew members and injuring three others.

TIPPECANOE
SW packet, wh b. New Albany, IN, 1840. 190 tons.

TISKILWA
SW packet, wh b. Kanawha, VA, 1834. 88 tons. She collided with WISCONSIN (see) on the Illinois River five miles above its mouth on March 19, 1837, sinking in a few minutes. Most of the dozen or so deck passengers were killed in the collision or were listed as missing.

TOBACCO PLANT
SW packet, wh b. Nashville, TN, 1832. 371 tons.

TOBASCO
SW packet, wh b. Cincinnati, OH, 1836. 397 tons.

TOLEDO
SW packet, wh b. New Albany, IN, 1838. 164 tons.

TOM BOWLINE
SW packet, wh b. Louisville or Portland, KY, 1834. 94 tons. Snagged in 1835.

TRADER
SW packet, wh b. Cincinnati, OH, 1831. 76 tons. Sank

in ice at Parkersburg, VA in January 1832.

TRADER
SW packet, wh b. Industry, PA, 1838. 29 tons.

TRANSIT
SW packet, wh b. Portsmouth, OH, 1838. 104 tons. Snagged at Coushatta, LA in October 1842.

TRANSPORT
SW packet, wh b. Pittsburgh, PA, 1832. 126 tons.

TRAVELLER
SW packet, wh b. Pittsburgh, PA, 1837. 40 tons.

TREMONT
SW packet, wh b. Pittsburgh, PA, 1836. 112 tons.

TRIBUNE
SW packet, wh b. Pittsburgh, PA, 1838. 220 tons.

TRICOLOR
SW packet, wh b. Portsmouth, OH, 1831. 130 tons.

TRIDENT
SW packet, wh b. Pittsburgh, PA, 1838. 70 tons.

TRIUMPH
SW packet, wh b. Cincinnati, OH, 1837. 68 tons. Worn out in 1843.

TROPIC
SW packet, wh b. Cincinnati, OH, 1836. 123 tons. Worn out in 1843.

TROUBADOUR
SW packet, wh b. Portsmouth, OH, 1835. 120 tons.

TROY
SW packet, wh b. Phillepa or Freedom, PA, 1836. 225 tons.

TROY
SW packet, wh b. Pittsburgh, PA, 1836. 120 tons.

TUCKAHOE
SW packet, wh b. Manchester, OH, 1836. 80 tons. Burned at Guyandotte, VA in June 1841.

TUSCAHONIA
SW packet, wh b. Jeffersonville, IN, 1834. 145 tons. Burned in 1836.

TUSCARORA
SW packet, wh b. Cincinnati, OH, 1833. 286 tons.

TUSCUMBIA
SW packet, wh b. Marietta, OH, 1835. 82 tons.

TUSKINA
SW packet, wh b. Pittsburgh, PA, 1835. 256 tons.

TWO FRIENDS
SW packet, wh b. Louisville, KY or Jeffersonville, IN, 1834. 121 tons.

UNION
SW packet, wh b. Williamsport, PA, 1831. 141 tons. Lost in ice at Parkersburg, VA in January 1832.

UNITED STATES
SW packet, wh b. Pittsburgh, PA, 1836. 338 tons.

UNITED STATES
SW packet, wh b. Pittsburgh, PA, 1837. 420 tons.

UTICA
SW packet, wh b. Pittsburgh, PA, 1840. 131 tons.

UTILITY
SW packet, wh b. Louisville, KY, 1831. 59 tons.

VALLEY FORGE
SW packet, ih b. Pittsburgh, PA, 1839. 199 tons. 168' x 25' x 5'6". Length over deck a little over 180'. She was the technical marvel of her day, being the first iron-hulled inland river steamer. Built by Robinson, Minis and Miller of south Pittsburgh for Capt. Thomas Baldwin (ca. 1804-1879). Her keel was made from ½-inch thick wrought iron plate. Most of her hull was made from 3/16 or 1/4-inch iron plate and was divided into nine watertight compartments. Twin cylinders had a 16-inch bore with 8-foot stroke. There were four boilers. She was enrolled on February 27, 1840. VALLEY FORGE operated between Pittsburgh, New Orleans and St. Louis, and spent a little time on the Cumberland River as well. In 1840 Capts. Isaac Hooper and Thomas Baldwin advertised her for an excursion from Pittsburgh to the Falls of St. Anthony. In fall 1842 she hit a snag below St. Louis and sank.

Raised and repaired, she continued to run until summer 1845. Her engines, boilers and cabin were transferred to the new boat ROBERT MORRIS, while her iron hull was scrapped.

VAN BUREN
SW packet, wh b. Pittsburgh, PA, 1833. 94 tons.

VANDALIA
SW packet, wh b. Marietta, OH, 1836. 298 tons.

VELOCIPEDE
SW packet, wh b. Cincinnati, OH, 1835. 123 tons. Off records in 1842.

VERMILLION
SW packet, wh b. Vermillion, OH, 1839. 39 tons.

VERMONT
SW packet, wh b. Pittsburgh, PA, 1836. 158 tons. She was enroute to St. Louis when she hit a snag about twenty miles above the mouth of Ohio River at Doolen Slough, MO in September 1841. VERMONT lost her cargo of dry goods valued at $200,000 and the boat was a total loss. According to the *New York Observer and Chronicle,* this accident occurred in December 1840.

VERSAILLES
SW packet, wh b. Cincinnati, OH, 1831. 83 tons. She was the first boat to arrive at Ft. Snelling in the 1832 navigation season. Snagged at Apalachicola, FL in January 1835.

VESTA
SW packet, wh b. Cincinnati, OH, 1831. 83 tons.

VESTA
SW packet, wh b. Cincinnati, OH, 1840. 35 tons.

VETERAN
SW packet, wh b. Ripley, OH or Maysville, KY, 1833. 86 tons. Cost $5,000.

VICKSBURG
SW packet, wh b. Jeffersonville, IN, 1837. 230 tons. Burned in 1837.

VICKSBURG
SW packet, wh b. New Albany, IN, 1838. 348 tons.

VICTOR
SW packet, wh b. Cincinnati, OH, 1837. 90 tons.

VICTORIA
SW packet, wh b. Brownsville, PA, 1837. 85 tons.

VICTORIA
SW packet, wh b. Marietta, OH, 1839. 179 tons.

VIENNA
SW packet, wh b. Ripley, OH, 1839. 155 tons. Cost $20,000. Snagged at Owensboro, KY in October 1841.

VINCENNES
SW packet, wh b. Vincennes, IN, 1833. 95 tons. Snagged at Mobile, AL in February 1838.

VIRAGO
SW packet, wh b. Aberdeen, OH, 1838. 50 tons. Cost $3,000.

VIRGINIA
SW packet, wh b. Pittsburgh, PA, 1837. 116 tons.

VISITOR
SW packet, wh b. Brownsville, PA, 1835. 100 tons.

VOLANT
SW packet, wh b. Cincinnati, OH, 1831. 76 tons. Burned at New Albany, IN in August 1833.

VOLANT
SW packet, wh b. Cincinnati, OH, 1839. 113 tons.

WABASH
SW packet, wh b. Frederickstown, PA, 1836. 43 tons.

WACOUSTA
SW packet, wh b. Steubenville, OH, 1834. 98 tons. Worn out in 1841.

WALK IN THE WATER
SW packet, wh b. Cincinnati, OH, 1837? 199 tons. Although she is listed as being built in 1837, the *Niles Weekly* of January 2, 1836 mentions her loss by fire at Natchez, MS with 1500 bales of cotton, most likely in late 1835.

WALKER
SW packet, wh b. Pittsburgh, PA, 1839. 112 tons.

Exploded boilers on Lake Pontchartrain in December 1840.

WANDERER
SW packet, wh b. New Albany, IN, 1831. 186 tons. Snagged at Mobile, AL in November 1836.

WARREN
SW packet, wh b. Cincinnati, OH, 1833. 290 tons.

WARREN
SW packet, wh b. Cincinnati, OH, 1834. 176 tons.

WARREN
SW packet, wh b. Brownsville, PA, 1836. 80 tons.

WARRIOR
SW packet, wh b. Pittsburgh, PA, 1832. 100 tons. 111' 5" x 19' x 5'. She carried three boilers. WARRIOR was owned by Capt. Joseph Throckmorton and William Hempstead of Galena, IL. She had one deck, a transom stern, with her main deck cabin accommodating officers and crew only. Having no passenger accommodations, she towed a safety barge. The steamer boasted a figurehead on her bow. Commandeered for government service in the Black Hawk War of 1832, WARRIOR carried a small 6-pound cannon. She stopped the advance of Chief Black Hawk and his warriors near DeSoto, WI on August 2, 1832, defeating them in a bloody massacre which brought an end to the Black Hawk War. She was snagged on the Missouri River in 1837.

WARSAW
SW packet, wh b. Ferguson, KY, 1831. 51 tons.

WARSAW
SW packet, wh b. Wheeling, 1833. 146 tons. Off records in 1838.

WASHINGTON
SW packet, wh b. Bridgeport, PA, 1834. 138 tons. Off records in 1838.

WASHINGTON
SW packet, wh b. New Albany, IN, 1837. 298 tons. Snagged in 1838.

WATCHMAN
SW packet, wh b. Bridgeport, PA, 1831. 129 tons. Snagged at Bayou Plaquemine, LA in July 1836.

WATER WITCH
SW packet, wh b. Nashville, TN, 1831. 120 tons. Snagged near Plaquemine, LA in 1833.

WATER WITCH
SW packet, wh b. New Albany, IN, 1839. 168 tons. Stranded in April 1844.

WATERLOO
SW packet, wh b. Jeffersonville, IN, 1833. 90 tons.

WAVE
SW packet, wh b. Cincinnati, OH, 1835. 78 tons. Burned at Peru, IL in June 1837.

WELLSVILLE
SW packet, wh b. Wellsville, OH, 1835. 33 tons.

WEST TENNESSEE
SW packet, wh b. New Albany, IN, 1840. 242 tons.

WESTERN
SW packet, wh b. Brownsville, PA, 1838. 154 tons. Burned at St. Charles, MO in June 1843.

WHALE
SW towboat, wh b. Marietta, OH, 1832. 314 tons.

WHEELING
SW packet, wh b. Pittsburgh, PA, 1835. 93 tons.

WILLIAM FRENCH
SW packet, wh b. Pittsburgh, PA, 1838. 265 tons.

WILLIAM GLASCOW
SW packet, wh b. Pittsburgh, PA, 1837. 249 tons. She caught fire on her way to St. Louis about fifteen miles from the mouth of the Ohio River at Mound City, IL in April 1839. There were about 100 passengers aboard, mostly immigrants. The flames spread quickly, but fortunately the gun powder on board did not ignite. She burned to the water's edge. NORTH STAR (see) rescued some of her passengers. The loss was placed at $15,000.

WILLIAM HULBERT
SW packet, wh b. Pittsburgh, PA, 1836. 107 tons. Name possibly WM. HURLBERT. Burned at Mobile,

AL in July 1839.

WILLIAM L. ROBESON
SW packet, wh b. Cincinnati, OH, 1835. 486 tons. 160' x 29' 6" x 10' 6". Her main deck was 194' x 54'. She was named for a prominent commission merchant of New Orleans. The boat was built at Thomas Weeks' yard in the Fulton district of Cincinnati during the fall and winter of 1835-36. ROBESON's engines were built by Anthony Harkness of Cincinnati. The eight boilers were 43 inches diameter and 23 feet long with two flues. She was constructed for a firm in Nashville.

WILLIAM PARIS
SW packet, wh b. Louisville, KY, 1839. 172 tons. Snagged at Grand Chain, IL in September 1841.

WILLIAM PARSONS
SW packet, wh b. Ripley, OH, 1831. 116 tons. Name possibly WILLIAM PIERSON. Snagged at Little Rock, AR in April 1835.

WILLIAM PENN
SW packet, wh b. Freedom/Beaver, PA, 1833. 84 tons.

WILLIAM PENN
SW packet, wh b. Wheeling, 1839. 145 tons.

WILLIAM ROBINSON JR.
SW packet, wh b. Pittsburgh, PA, 1836. 277 tons. Collided with CLARION at Fairfield, AL in March 1843.

WILLIAM T. BARRY
SW packet, wh b. Cincinnati, OH, 1832. 148 tons. Stranded on Lake Pontchartrain in March 1836.

WILLIAM W. FRY
SW packet, ih b. Jeffersonville, IN or Pittsburgh, PA, 1840. 303 tons. Her iron hull parts were manufactured in England and shipped to the U. S. for assembly. Off records in 1858.

WILLIAM WALLACE
SW packet, wh b. Portland, KY, 1831. 70 tons.

WILLIAM WALLACE
SW packet, wh b. Cincinnati, OH, 1837. 160 tons.

WILLIAM WIRT
SW packet, wh b. Cincinnati, OH, 1836. 110 tons.

WILMINGTON
SW packet, wh b. Cincinnati, OH, 1837. 206 tons. Exploded boilers near mouth of Arkansas River at Beulah Lake, MS on November 18, 1839, killing or scalding eighteen persons. Lytle-Holdkamper lists the date as November 8.

WINCHESTER
SW packet, wh b. Parkersburg, VA, 1837. 190 tons. Snagged at Grand Chain, IL in August 1842.

WINNEBAGO
SW packet, wh b. Pittsburgh, PA, 1831. 91 tons. Off records in 1836.

WISCONSIN
SW packet, wh b. Pittsburgh, PA, 1834. 87 tons. She ran in the Galena trade 1834. The next year she arrived there with two keelboats, Capt. Henry Crossle, master. WISCONSIN also ran in regular service from Galena and Dubuque to Prairie du Chien in 1836, Capt. O'Flaherty, master. Collided with TISKILWA (see) in Illinois River, 1837. She was raised and still running in 1838.

WM. H. HARRISON
SW packet, wh b. Cincinnati, OH, 1838. 200 tons.

WOODSMAN
SW packet, wh b. Pittsburgh, PA, 1831. 84 tons. Still running in 1838.

WORDEN POPE
SW packet, wh b. Louisville, KY, 1838. 117 tons.

WORDEN POPE
SW packet, wh b. Louisville, KY, 1840. 205 tons.

WORKEY
SW packet, wh b. Cincinnati, OH, 1831. 145 tons.

WYOMING
SW packet, wh b. Augusta, KY, 1832. 105 tons.

YALOBUSHA
SW packet, wh b. Cincinnati, OH, 1837. 80 tons. Possibly named YALLA BUSHA or YALLO BUSHA. Burned at Donaldsonville, LA in January 1848.

YAZOO
SW packet, wh b. Jeffersonville, IN, 1834. 150 tons.

YELLOWSTONE (or **YELLOW STONE**)
SW packet, wh b. Louisville, KY, 1831. 144 tons. 120' x 20' x 6'. She was built by Pierre Chouteau for the Missouri River fur trade. In 1832 she took painter George Catlin to the mouth of Yellowstone River and the following year carried Prince Maximilian up the Missouri. YELLOWSTONE was in St. Louis-Galena lead trade 1834. She was sold to New Orleans in 1835. The history of this Missouri River pioneer is well documented in the 1985 book *The Voyages of the Steamboat Yellowstone* by Donald Jackson. She was stranded on Brazos River, TX in 1837.

ZANESVILLE
SW packet, wh b. Marietta, OH, 1838. 213 tons.

ZANESVILLE
SW packet, wh b. Point Harmar, OH, 1838. 83 tons. Although the tonnage differs from vessel in previous entry, they may be the same boat.

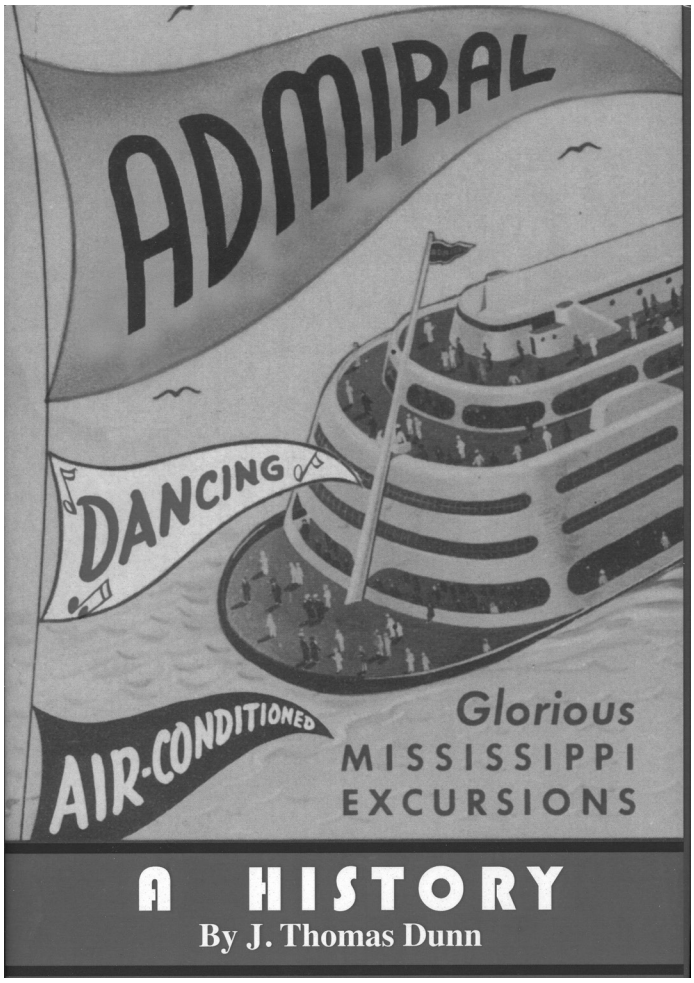
ZEPHYR
SW packet, wh b. Cincinnati, OH, 1840. 92 tons. Snagged at Portsmouth, OH in May 1843.

This list concludes the index of Western Rivers steamboats built 1831-40. Steamers constructed in the third decade were published in three installments in December 2013, March 2014, and in this issue. The index for steamers built 1821-30 appeared in the September 2013 Reflector*, and the 1811-20 index appeared in June 2013.*

The final index for steamboats built 1841-47 will be published in separate installments in December 2014 and March 2015.

Visit us online at www.s-and-d.org
for more current events and up-to-date news.

Like us on Facebook



New ADMIRAL Book by S&D Board Member Tom Dunn

Tom Dunn's long-awaited narrative of the fascinating and convoluted story of the former Streckfus excursion boat ADMIRAL made its appearance this spring. Tom's association with the ADMIRAL began over forty years ago as advertising and sales manager for the boat, while his connection to vessels in the Streckfus and Gateway excursion fleets continues to the present day.

Tom gives us an insider's look at the behind-the-scenes story of this St. Louis riverfront icon, and tells a history that river fans throughout the country will want to add to their libraries. From Capt. Doc Hawley's introduction to excursion boating, through chapters on the Streckfus steamboat family and the design and operation of the flagship of the Streckfus fleet, to her many reincarnations over the years, the story unfolds with illustrations and photos highlighting each chapter. 174 pages. Order from Admiral History, PO Box 8811, St. Louis, MO 63101. $29.95 plus $3.00 shipping and handling.

The Fast Boats

by Jerry Canavit

Whenever riverboat buffs gather for conversation, one question that always seems to provide fuel for debate is: which paddlewheel steamboat was the fastest? It is certainly a fascinating question and one that is usually addressed with interest and passion. Although much has been written about the legendary fast boats, never, to my knowledge, has there been a single vessel that has gained a real consensus as being the ultimate inland river greyhound. It seemed peculiar to me why this was so – after all, one boat had to be the fastest, right?

Armed with this notion, I began research that I was sure would enable me to determine the fastest vessel. I plunged into all my books and periodicals, accessed others from inter-library loan, wrote letters to museums, historical societies and persons much more knowledgeable than I, certain that it was possible to determine which was the fastest paddlewheel steamer ever to run on the Western Rivers of the United States.

At first glance, it seemed that making this determination wouldn't be such a difficult task. But indeed, with closer examination it became apparent that I had opened a real can of worms. Unfortunately, it wouldn't be nearly as simple as I had thought; for time and distance comparisons alone would not provide enough information to make any valid conclusions. A number of other variable factors had to be considered and examined.

Tide and Current

Many fast riverboat trips were assisted by current or tide, which made the boats apparently faster. Conversely, against these forces their speed over a fixed distance decreased. Further complicating matters were narrow and fast channels (chutes) and reverse eddies which amplified these conditions.

An example of these forces at work is the 1896 run of the Ohio River sidewheeler CITY OF LOUISVILLE (1095). On April 5th of that year, she made 22.38 mph downstream on the 133.5 miles between Cincinnati and Louisville. She returned that same day at 13.82 mph; a difference of 8.56 and an average for both directions of 18.10.

Performance records of the same vessel operating in different waters are uncommon, but those we have show how their speed varied in different environments. The ALVIN ADAMS (0214), a fast sidewheeler in the Louisville-Wheeling trade, made many upstream trips with better than 10 mph averages on the swift upper Ohio. Her times were comparable to those of her quickest contemporaries, MESSENGER NO. 2 (3909), TELEGRAPH NO. 2 (5323) and BUCKEYE STATE (0728). In the New Orleans-Baton Rouge trade on the more sedate Lower Mississippi, she consistently averaged about 16 mph, equal to the fastest steamers in those waters.

Determining the actual strength of tide and current during trials of speed were pretty much subjective, generally made by the captain and not subject to verification, adding yet another variable factor. The ideal condition, of course, would be to have no influences to aid or hinder the vessel's progress. However, "through-the-water" trials were extremely rare.

Wind

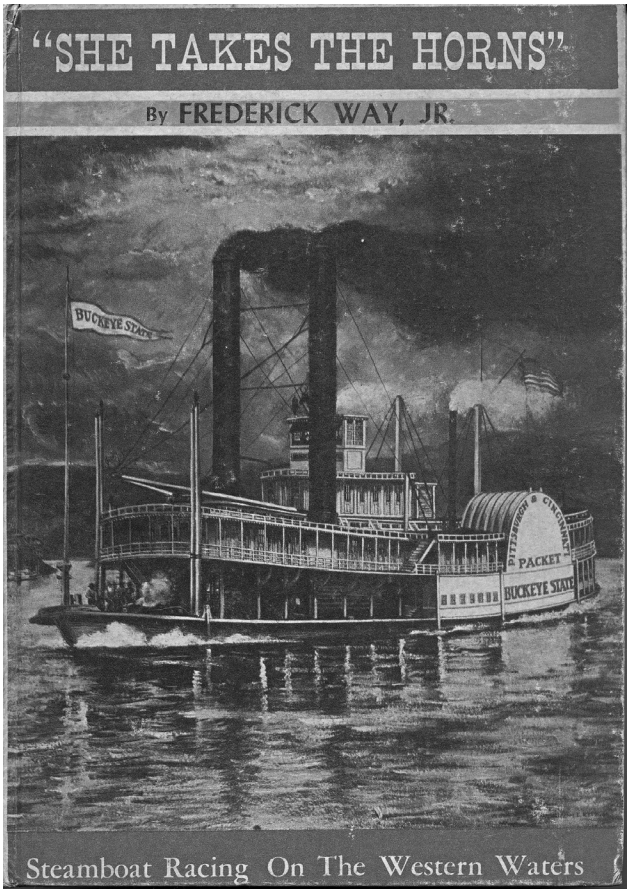
In some cases, the direction of the wind and its velocity during a trial of speed are documented; for others they are not. It must be noted too that the wind could have a differing effect on individual boats, as the design of superstructure and housing varied from vessel to vessel. Obviously, a tailwind was of more assistance than a headwind.

Load

The load of a vessel certainly had an effect on its speed through the water. A boat traveling with a full load would expose more wetted hull

surface to the water, causing more resistance than a boat running light. Therefore, the greater the area of wetted hull surface traveling through the water, the greater the resistance.

Some vessels made great speed during their normal course of operation, while others were "groomed" for making speed. ROB'T. E. LEE (4777) was reported to have made considerable preparation in this regard with its famous race in 1870 with the steamer NATCHEZ (4109), when passengers and freight were refused and hand-picked fuel was used.



Capt. Fred Way's 1953 classic, "She Takes the Horns," the story of steamboat racing on the Western Rivers.

Freight or cargo could be favorably distributed to "trim" the vessel to sit in a manner that ensured the most efficient progress through the water. It was generally felt that a vessel that was evenly trimmed would run faster than one with either the head or stern down, but this was not true with every boat. Each boat behaved differently and the optimum trim was learned by testing and experience.

Since boats with light loads tended to run quicker than those burdened with heavier ones, it's not hard to imagine why many of the record-setting trips by the fast Mississippi River packets were made in April and May when upstream freight activity was at its lightest.

Landings

Most lengthy trips were never made non-stop from point to point, and since most trips were made in the pursuit of commerce, landings had to be made to take on and discharge passengers and freight. This activity was certainly detrimental to high average speeds (especially on the Mississippi) and presents a variable that is, in many cases, beyond verification. The times lost in making landings was usually kept by the captain and, in some cases, some "claimed" deductions were so sizable that their credibility must be suspect. In other cases, the number and length of landings are just not available and this lost time must be factored into the overall average speeds, even though the actual running times were faster.

Distance

Probably the most difficult fact to determine is the "actual distance" covered by a vessel. On a river, one method of determining distance would be to calculate mileage up the middle of the channel. However, the channel distance is usually longer than the actual river distance traveled, and since boats did not always follow the channel, this is not a dependable measurement. Making landings also resulted in additional distance. So did the act of overtaking other vessels en route. One pilot might run a stretch of river in a particular way while another might be able to run a different line and save distance. Boats of lighter draft might actually run a shorter distance on the same trip than a boat of deeper draft simply because they could run closer in. Indeed, skillful and steady piloting counted for a lot too, for the longer a rudder was held straight, the less the resistance and the better the speed.

On the Mississippi River, distance as a variable is well illustrated. On this great body of water, the distance between major ports over time has diminished through natural and man-made cut-offs. For example, the distance in 1870 from New Orleans to St. Louis at the time of the ROB'T. E.

LEE /NATCHEZ contest was 1218 miles. Today it is less than 1049 miles. The actual number of miles here makes very little difference as, even though the distance traveled is less in terms of miles, there has been hardly any change at all in sea level elevation between these two ports. Because of this, the river must still drop its given and constant fall to the sea. This simply means the more miles the river travels, the more sluggish the current; the less miles, the swifter the current. A boat today trying to match the time of ROB'T. E. LEE's 1218-mile run on this course in 1870 would have to travel about 170 fewer miles, but would encounter a greater current to compensate for the lesser distance. The average mph speed for the shorter distance would be less than for the greater distance, even though the actual running times were the same. More simply put, if ROB'T. E. LEE could run the same race today as she ran in 1870, making the port to port time of 3 days, 18 hours, 14 minutes, she would do so at an average speed of about 11.60 mph for the 1049 mile distance instead of the 13.50 mph she averaged for the 1218 mile trip.

Paddlewheel Efficiency

The design of the paddlewheel had some effect on the vessel's speed through the water. Fulton found that water encountered less resistance on the side of the hull than at the stern, so sidewheels should be more efficient. I am told, however, that quantifying this is very difficult. The diameter/ size of the paddlewheel has less to do with speed than how the buckets interface with the water. The diameter means little if the wheel is "buried" in the water. A good example of this is the sternwheeler DELTA QUEEN. The QUEEN's wheel has a diameter of 28 feet, but it normally runs too deep in the water, usually having 6-7 buckets submerged. In comparison, the sternwheeler NATCHEZ's wheel is 25 feet in diameter, but runs with only 3-4 buckets submerged. The principle here is the same as rowing a yawl – if the oars are too deeply submerged there is very little speed; if they skim the water, there is good speed.

Feathering paddlewheels, used on later sidewheelers, were more efficient in terms of slip over wheel and actual water lifted (estimates range from 10-28% more efficient), but they performed less efficiently in terms of durability and their additional weight. The staggered paddlewheel used on some sternwheel steamers probably did little to make them more efficient, however, they did tend to make their operation somewhat smoother. A few vessels were equipped with center-mounted paddlewheels. These were primarily ferryboats and were not intended for speed, although some of them could move along at a good clip. The advantage to the center-mounted wheel was protection from floating hazards and stability in rough water. So, were sidewheels more conducive to speed than sternwheels? Probably yes, but there were a number of brilliant exceptions.

Timing Methods

During the period of time when most steamboats were running, there was really no uniform way of telling accurate time, as each city set its clocks to local solar time. This in itself presented timing problems, however it was compounded by the fact that many timepieces during that period simply did not keep accurate time. This was especially evident in the much contested speed trials of ECLIPSE (1688) and A. L. SHOTWELL (0021) in 1853 on the Mississippi River, when there was such a discrepancy in the timing of the 1455-mile trip that the matter of which vessel actually made the faster trip was never decided with any certainty.

Shallow Water vs Deep Water

Bernoulli theorized that when a hull traveling through water passes over a shallow reef or plane, a depression or vacuum-like resistance is created that adds resistance to the transit. More simply put, a boat traveling in shallow water would encounter more resistance than one traveling in deep water. A modern-day example of this theory in action was the annual race between BELLE OF LOUISVILLE and DELTA QUEEN on the Ohio River. The common belief was that DELTA QUEEN was inherently the faster boat. The truth is that this is not so, for the BELLE has more horsepower per ton than the QUEEN. In shallow water with a light load, the BELLE would probably win every race, for Bernoulli's Principle would hamper the QUEEN.

In deep water it would be a pretty good race every time. However, neither of these boats can really be considered as fast. The sternwheel NATCHEZ currently running in New Orleans, while a very speedy vessel, might not make it on our list of "fast boats."

Although sidewheelers could operate on no more water than sternwheelers, shallow water did tend to make them labor or "run off" toward deeper water when they came too close to a sandbar or the edge of the channel – a characteristic not shared by their sternwheel counterparts.

Hull Design

The shape of a riverboat's hull had much to do with how fast she could pass through the water. A "fast" hull would have a very pointed model bow and a streamlined shape and be able to pass through the water with a minimum of resistance and drag. Riverboats, however, were not built solely for the purpose of running fast. Reality dictated that the hull design be an effective compromise of speed, carrying capacity and economy of operation. It should also be specifically suited for the region and conditions in which it was intended to operate. The hull on a boat designed for the Missouri River would look very different from one used on the Lower Mississippi. Conversely, the hull on a Mississippi River steamer would have been at a disadvantage on the Columbia River, as they were constructed too lightly for use on those rough waters. Good contour lines and a high ratio of length to width were also pretty good indicators of a hull's speed.

Limber vs Stiff Hulls

In most circles of knowledgeable old steamboat men on the Western Rivers, a "limber" steamboat was regarded as the fastest one. For some reason, when the tension on the supports for the hulls of these boats was lessened, allowing the hulls to work and strain freely, the faster they seemed to move through the water. There is probably a scientific reason for this, but it is a fact that many of the holders of the fastest speed records were wooden-hulled riverboats that ran through the water like a piece of rubber. When I once quizzed someone very knowledgeable about such matters, he replied, "I have always thought that the limber-hull for speed business is an old wives' tale. On the other hand, I've met some pretty smart old wives."

The Sum of the Parts

Why do some boats run faster than others, even when they are similarly equipped? This is a real puzzle. Perhaps it is the result of a synergism of many nuanced factors working together to produce exceptional performance. A good example of this is illustrated by a comparison of two Upper Mississippi sidewheelers operated by the Minnesota Packet Company in the late 1850s. KEY CITY (3278) and ITASCA (2803) were identical twins. Their lines and hull (length, beam and depth of hull) were the same; both had boilers of the same number and size, and their engines were so identical that their parts were interchangeable. Yet, KEY CITY could run from one to three mph faster than ITASCA with the same pilots at the wheel. Why was this so? It was certainly an interesting topic for discussion by rivermen, but the experts could never agree, and the truth is they probably just didn't know.

Favoritism and Other Variables

Steamboat men were usually a prejudiced lot and much more convincing in their arguments and opinions than the average "interested" person. Debates could address such topics as steam pressure, fuel additives and the nuances of engineroom crew proficiency. Older steamboat men were sometimes so impressed with a steamboat in their youth that their boat became a paragon that grew more with each passing year, while they tended to regard newer boats as "Johnny-come-latelies" whose performances could never match those of their old favorite.

Many regions had their favorite boat and tended to support their vessel's accomplishments, at times beyond all reasoning. Sometimes races were held to determine speed supremacy, often backed by sizable wagers and occasionally at some risk to the traveling public. The winners of these races usually settled the argument as to which boat was the faster in that particular situation, but what of other boats

that would never have a chance to race under nearly similar conditions? How would ROB'T. E. LEE fare against GREY EAGLE in a sprint from Cincinnati to Pittsburgh? How would NATCHEZ measure up against ECLIPSE in a wide-open run from St. Louis to St. Paul? Would ROYAL be able to keep up with J. M. WHITE III in a dash from New Orleans to Vicksburg? Unfortunately, we'll never know the answers to these questions, although I'm sure we won't be without opinions.

So which boat was the fastest and can this really be determined? Alas, this is probably one of those intriguing questions without an answer. The purpose of this effort, therefore, is to present a collection of accounts of high-speed runs by commercial steam-powered, paddlewheel vessels that exhibit clearly exceptional performance. The conditions under which these vessels ran varied to some degree and certainly influenced their average speeds. Many were made with a favorable current or tide and with a friendly wind. Others were seemingly made with the forces of nature against them for most of the trip.

On the Western Rivers the times of record are primarily for upstream (against the current) trips, as downstream trips were generally ignored as a valid indicator of the vessel's performance. Hence the slower average speeds.

Two of the most notable Mississippi River greyhounds, ECLIPSE and J. M. WHITE III, were never allowed to be "let out," as their owners, for whatever reason, were not interested in setting speed records. Had they been, their performances would have reflected more impressive numbers and might even have put them at the head of the list. So, with all of the above mentioned qualifications, any conclusions as to one boat being the fastest will have to remain with the reader.

The following brief accounts are of vessels running a specific course, almost always in their regular pursuit of commercial trade. The times and speeds are extraordinary and faster than normal because they were exceptionally fast vessels and, in most cases, either a record time was being attempted, they were racing, or a faltering schedule was trying to be maintained.

My candidates for Fastest Western Rivers Steamboat appear in the list that follows.

The List

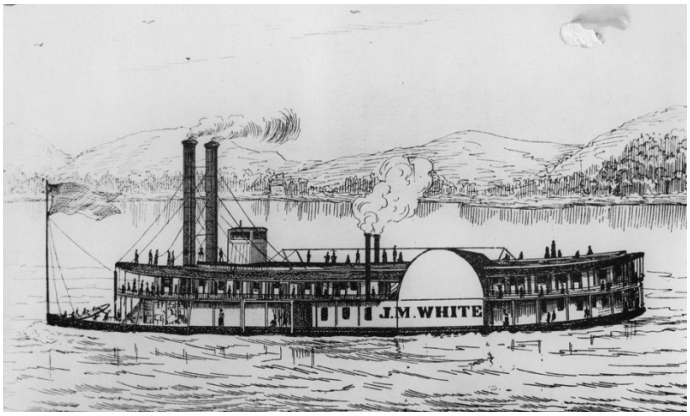
J. M. WHITE II (2866) 1844-1847

Mississippi River sidewheel packet. Wood hull. b. Elizabeth, PA. Owned by J.M. Convers, J.M. White and E.N. Beebie, St. Louis. Hull: 200' x 30.5' x 7.6' (233' x 62' overall) 498 tons. Engines: 30" x 10' stroke. Seven 2-flue boilers. Sidewheels: 30' diameter with 12' buckets. Designed by William "Billy" King of Pittsburgh.

March 6, 1844.

Pittsburgh, PA to Cincinnati, OH. Distance: 470 miles. Time: 24 hours, 5 minutes. Average speed: 19.50 mph.

J. M. WHITE II left Pittsburgh with passengers eating their noon meal and arrived in Cincinnati the following noon . She once ran a speed trial from New Orleans to St. Louis, making the trip in 3 days, 23 hours, 9 minutes. This time was not bettered until 1870 by NATCHEZ in 3 days, 21 hours, 58 minutes and by ROB'T. E. LEE in 3 days, 18 hours, 14 minutes.



J. M. WHITE II. Courtesy of Public Library of Cincinnati and Hamilton County

BUCKEYE STATE (0728) 1850-1857

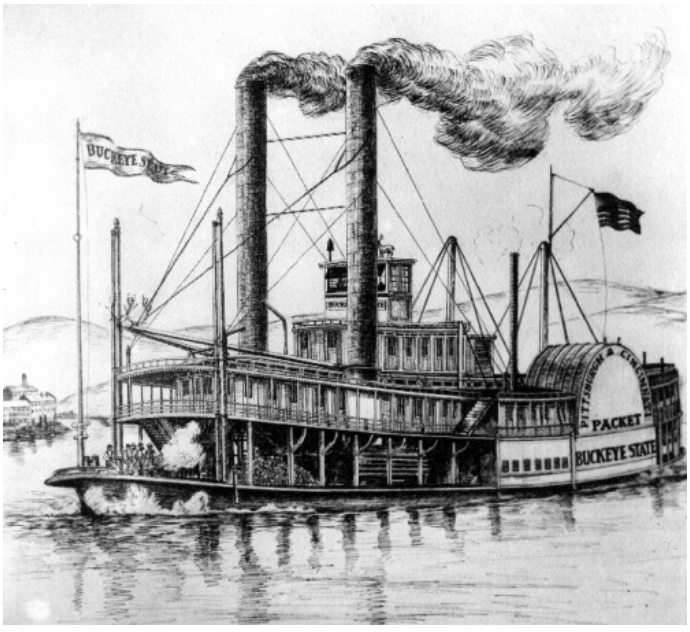
Ohio River sidewheel packet. Wood hull. b. Shousetown, PA. Operated by Pittsburgh & Cincinnati Packet Co. Constructed under supervision of David Holmes of Pittsburgh. Hull: 260' x 29.4' x 6.6' built by E & N Porter Co., Pittsburgh. 617.2 tons. Engines: 29½" x 8' stroke. Broadhorn, noncondensing engines built by J. Nelson & Co. 5 boilers, 42" x 30' with two 16"

diameter flues. Sidewheels: 31' 8" diameter with 12' buckets.

May 1, 1850

Cincinnati, OH to Pittsburgh, PA. Distance: 470.3 miles. Time: 1 day, 19 hours. Average speed: 10.93 mph.

Shortly after her launching, Capt. Samuel Dean made preparations for a record upstream run from Cincinnati to Pittsburgh. The record time for this trip had been established in 1848 by TELEGRAPH NO. 2 in 1 day, 20 hours, 47 minutes. Capt. Dean loosened her up for the trip by knocking out some of the diagonal braces supporting the Sampson posts and hog chains. Her boilers were stoked with a combination of choice Pittsburgh lump coal and Ohio Valley beech hardwood. A generous supply of pine knots and resin was also used. Her engineer adjusted the full-stroke cams ahead to give "exhaust lead" and, apparently, full-stroked his engines over the entire course. She carried 200 passengers and no freight. Although the current was running about 4 mph, in some places it was much more. After running 24 hours, she was above Belpre, OH. At the 36-hour mark she was at the foot of Brown's Island above Steubenville, OH. She arrived in Pittsburgh in 43 hours. During the trip, she lost 15 minutes in fog at Marietta, OH, stopped to wood up three times and coaled once.



BUCKEYE STATE. Courtesy of Public Library of Cincinnati and Hamilton County.

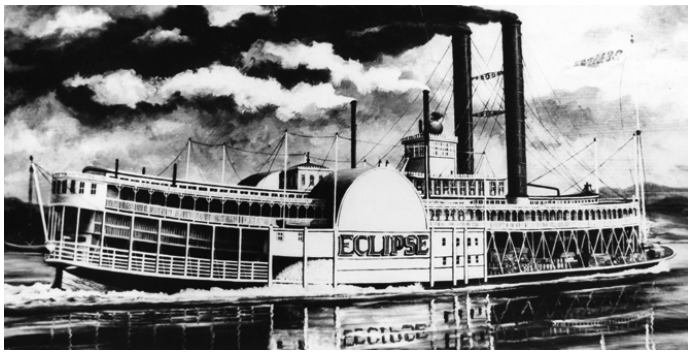
ECLIPSE (1688) 1852-1860

Mississippi River sidewheel packet. Wood hull. b. New Albany, IN. Hull: 350' x 37.4' x 8.4' (365' x 77' x 9' overall) 1117 tons. Engines high pressure, non-condensing, 36" x 11' stroke. Eight Western River type boilers 42" x 32', each with two 17" flues. Eight small boilers originally placed atop the main battery of eight larger ones were later removed when they proved ineffective. Sidewheels: 40' diameter with 15' buckets.

May 14, 1853

New Orleans, LA to Louisville (Portland), KY. Distance: 1455 miles. Time: 4 days, 9 hours, 27 minutes. Average speed: 13.79 mph.

The giant steamer ECLIPSE left New Orleans at 9:59 a.m. and began her long "shake down" cruise to Louisville. Her owner insisted that he was not trying to set a speed record. Be that as it may, she arrived at Portland, just below the Louisville Canal at 7:26 p.m. on May 18. On May 21, 1853, A. L. SHOTWELL completed the same run in 4 days, 9 hours, 38 minutes, causing much controversy about which vessel actually made the faster time. Disagreements and discrepancies with time keeping kept an absolute winner from ever being declared, although both sides claimed victory. Comparisons of the controversial times were only separated by minutes. However, arguments seem to favor the claims of ECLIPSE supporters.



ECLIPSE. Courtesy of Public Library of Cincinnati and Hamilton County.

GREY EAGLE (2457) 1857-1861

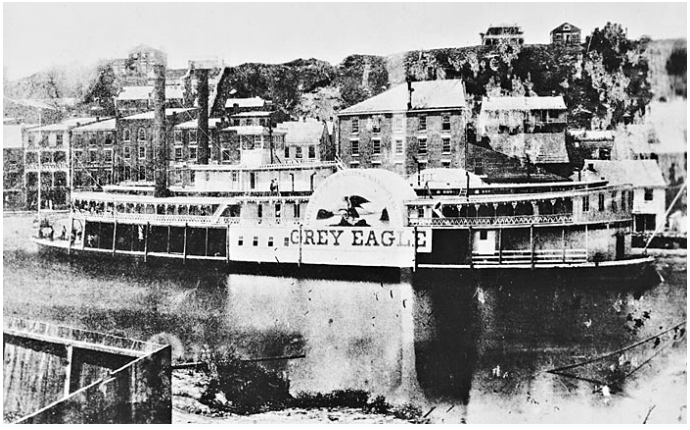
Upper Mississippi River sidewheel packet. Wood hull. b. Cincinnati and operated by Minnesota Packet Company. Hull: 250' x 35' x 5'. 382 tons. Engines 22" x 7' stroke. Four boilers. Probably the fastest post-bellum boat on the Upper Mississippi. Hit a pier at Rock Island Bridge on May 9, 1861 and sank in twenty feet of water. This accident brought a close to the longtime river career

of pioneer Upper Mississippi steamboatman Capt. Daniel Smith Harris of Galena, IL.

August 17, 1858

Dubuque, IA (Dunleith, IL) to St. Paul, MN. Distance: 265 miles. Time: 25 hours, 40 minutes. Average speed: 10.75 mph

News of completion of the Atlantic Cable came by telegraph to Dubuque, where Capt. Daniel Smith Harris was preparing GREY EAGLE for her run to St. Paul. The message had also reached Prairie du Chien, WI, 61 miles upriver, where Capt. David Whitten was readying ITASCA to make the same run. In an attempt to beat ITASCA to St. Paul with the news, which also included a personal greeting from Queen Victoria to President Buchanan, Capt. Harris left Dubuque at 6:00 a.m. with a wide open throttle and boilers fired with the best soft coal, reinforced with barrels of pitch. ITASCA also left Prairie du Chien at the same time. GREY EAGLE charged upriver at phenomenal speed after the unsuspecting ITASCA. She caught her when only a few miles below St. Paul. The real race began at that point when Capt. Whitten realized Capt. Harris' intentions. The two vessels arrived in St. Paul running neck and neck with whistles blowing and cannons booming, GREY EAGLE winning by a nose. Records indicate that she made 23 landings on the trip, but many of these may have been made on the return trip. 35 cords of wood were consumed.



GREY EAGLE. Courtesy of Murphy Library, University of Wisconsin - La Crosse.

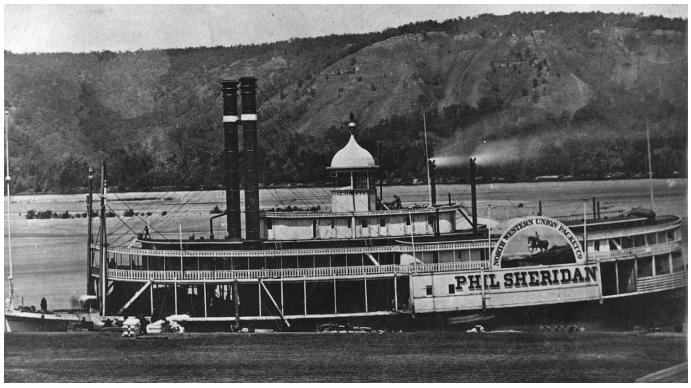
PHIL SHERIDAN (4480) 1866-1876

Upper Mississippi River sidewheel packet. Wood hull. b. Cincinnati and originally ran in Wheeling-Cincinnati trade. Hull: 227' x 36.5' x 6'. 728 tons. Engines 22" x 7' stroke. Four boilers 40" x 26' with five 9" flues. Purchased by the Davidson (White Collar) Line and taken to Upper Mississippi. Ran St. Louis-St. Paul trade in competition with big Northern Line packets HAWKEYE STATE (2557) and SUCKER STATE (5206) and engaged them often. Briefly returned to Ohio River before returning again to Upper Mississippi. She sank while being repaired on the ways at La Crosse, WI in 1876.

July 3, 1867

St. Louis, MO to Dubuque, IA. Distance: 439 miles. Time: 40 hours, 45 minutes. Average speed: 10.77 mph.

While racing with Northern Line's HAWKEYE STATE, the PHIL SHERIDAN left St. Louis at 4:30 p.m. on July 3rd and arrived Dubuque at 10:55 a.m. on July 5th, making 17 landings enroute. Although HAWKEYE STATE lost the contest with SHERIDAN up to Dubuque, she continued on to St. Paul, setting a record time from St. Louis to that city of 2 days, 21 hours, 49 minutes – a record that still stands.



PHIL SHERIDAN. Courtesy of Murphy Library, University of Wisconsin - La Crosse.

NATCHEZ VI (4109) 1869-1879

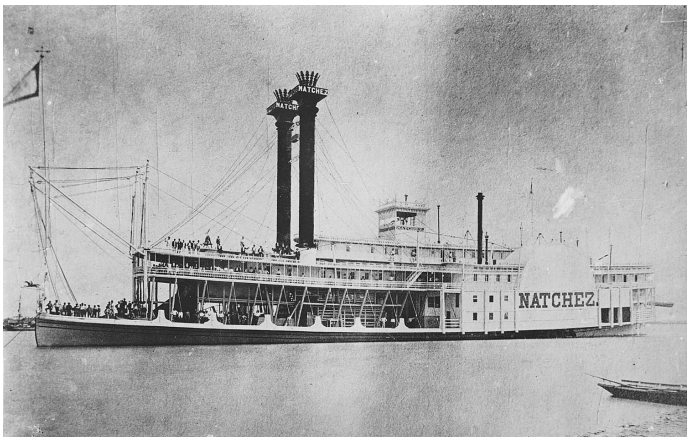
Mississippi River sidewheel cotton packet. Wood hull. b. Cincinnati for Capt. Thomas P. Leathers. Hull: 301' x 42.6' x 9.8'. 1547 tons. Engines 34" x 10' stroke built by Niles Iron Works. Eight boilers with 2 flues each. She made a record cotton trip to New Orleans in 1874 carrying 5,511 bales.

October 16, 1870

New Orleans, LA to Natchez, MS. Distance: 265 miles. Time: 16 hours, 51 minutes. Average speed: 15.79 mph.

This time bettered that of the LEE during their

famous race earlier that year. The LEE tried to capture this record twice, succeeding on the second attempt with a time of 16 hours, 36 minutes, 47 seconds at an average speed of 15.95 mph.



NATCHEZ VI. Courtesy of Murphy Library, University of Wisconsin - La Crosse.

ROB'T. E. LEE (4777) 1866-1876

Mississippi River sidewheel cotton packet. Wood hull. b. New Albany, IN. for Capt. John W. Cannon. Hull: 285.5' x 46' x 9'. 1456.31 tons. Engines 40" x 10' stroke operating at 120 psi. Eight boilers 42" x 28'. Sidewheels: 38' diameter with 16' 6" buckets.

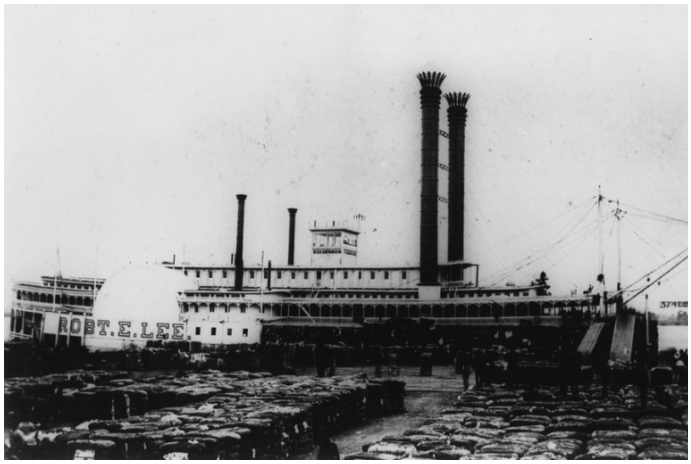
June 30, 1870

New Orleans, LA to Natchez, MS. Distance 265 miles. Time: 17 hours, 11 minutes. Average speed: 15.42 mph

On the first leg of her race with NATCHEZ, the LEE, with her normal crew complement, no passengers or freight and just 33 invited guests on board, made the 265-mile trip leaving New Orleans at 4:58:30 p.m. and passed the city of Natchez at 10:11 a.m. The time for NATCHEZ, running a few minutes behind the LEE, was identical to the minute. After her famous New Orleans-St. Louis race in July 1870, the rivalry continued between the two steamers. On October 16, 1870, NATCHEZ ran the same 265-mile trip in 16 hours, 51 minutes at an average speed of 15.73 mph. On October 18, the LEE tried to better this time and failed by 8 minutes. The horns were then transferred back to NATCHEZ, but remained with her only until LEE won them back on October 27 as noted above.

J. M. WHITE III (2867) 1878-1886

Mississippi River sidewheel cotton packet. Wood hull. b. Howard Shipyard, Jeffersonville, IN



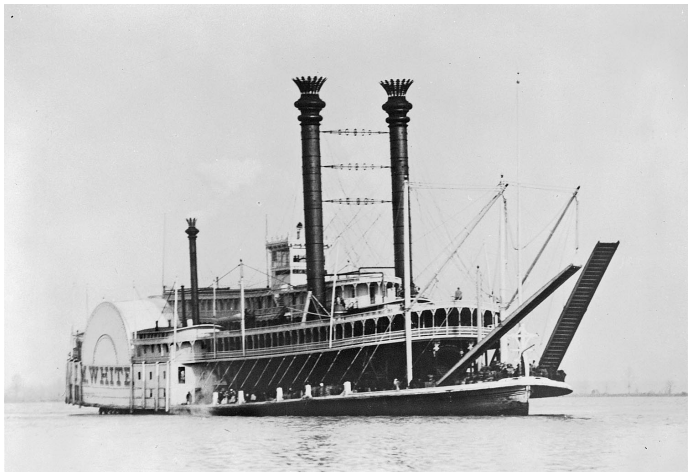
ROB'T. E. LEE. Courtesy of Public Library of Cincinnati and Hamilton County.

for Greenville & New Orleans Packet Co. Hull: 312.7' x 47.9' x 11.5' (321' x 91' overall) 2027 tons. Engines 43" x 11' stroke, built by Ainlee and Cochran & Co. Rated 3400 horsepower and operating at 178 psi. Ten boilers, 42" x 34' with two 16" flues each, built by Joseph Mitchell. Sidewheels: 44' diameter with 19' buckets. Destroyed by fire in 1886.

October 23, 1881

New Orleans, LA to Baton Rouge, LA. Distance: 133.2 miles Time: 7 hours, 40 minutes. Average speed: 17.34 mph.

While on a regular run with a load of freight and passengers, WHITE ran from New Orleans to Baton Rouge in a time, including all stops and a delay en route, that was about twenty minutes faster than that of ROB'T. E. LEE during her race with NATCHEZ in 1870. It was reported that there were no special preparations for making more than her normal speed on this trip.



J. M. WHITE III. Courtesy of Murphy Library, University of Wisconsin - La Crosse.

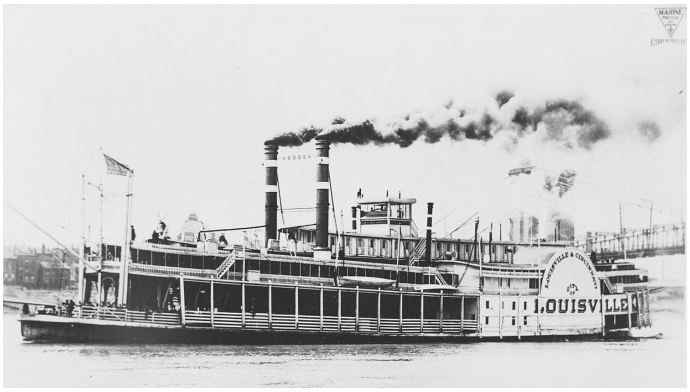
CITY OF LOUISVILLE (1095) 1894-1918

Ohio River sidewheel packet. Wood hull. b. Howard Shipyard, Jeffersonville, IN for Louisville and Cincinnati Packet Co. Hull: 301' x 42.7' x 7'. Engines 30" x 10' stroke built by Frisbie Engine and Machine Co. of Cincinnati. Eight water tube boilers 42" x 26'. Destroyed by ice in 1918 and dismantled.

April 18, 1894

Louisville, KY to Cincinnati, OH. Distance: 133.5 miles. Time: 9 hours, 42 minutes. Average speed: 13.76 mph.

With Capt. John Brennan in command, CITY OF LOUISVILLE departed Louisville at 3:00 p.m. headed upstream. At 3:57 she passed Charlestown. She made Bethlehem at 5:04, Madison at 6:16, Warsaw at 8:30, and Lawrenceburg at 11:02. She arrived at the foot of Main Street, Cincinnati at 12:42 a.m. with the river at 22 feet 10 inches, on a run that has never been bettered. Two years later on April 5, 1896, she made the record downstream run in this trade with a trip of 5 hours, 58 minutes at an average speed of 22.38 mph. She returned to Cincinnati later that day in 9 hours, 40 minutes (13.82 mph), beating her previous record by two minutes. Average speed for the round trip was 18.10 mph. At that time there was 47 feet of water on the Cincinnati gauge.



CITY OF LOUISVILLE. Courtesy of Murphy Library, University of Wisconsin - La Crosse.

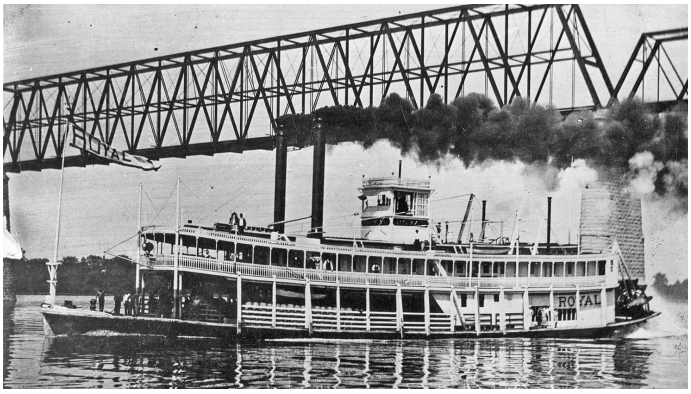
ROYAL (4860) 1891-1896

Ohio River sternwheel packet. Wood hull. b. Evansville, IN for Capt. J. B. Thompson and C. G. Perkins for Evansville-Henderson trade. Hull: 163.6' x 30.6' x 6.6'. Engines 15½" x 5½' stroke operating at 169 psi. Three boilers 40" x 24' with five 8" flues. ROYAL had iron cylinder timbers, iron rudders and a staggered sternwheel. She burned above the Evansville wharf in 1896.

May 16, 1891

Henderson, KY to Evansville, IN. Distance: 13 miles. Time: 52 minutes. Average speed: 15.00 mph.

ROYAL was a truly exceptional boat, owing much of her speed to her marvelous hull lines designed by C. G. Pearce of Kingston, Ontario. Her performance becomes particularly noteworthy when compared to other well-known vessels. ECLIPSE in 1852 took 57 minutes to cover the same distance. The racer ROB'T. E. LEE once ran the course in 49½ minutes, but took a short cut that saved an estimated 3 minutes – so it's difficult to say that the LEE's time was any faster than ROYAL's.



ROYAL. Courtesy of Murphy Library, University of Wisconsin - La Crosse.

This completes the list of steam-powered paddlewheel vessels that I believe are probably the fastest to ever run on the Western Rivers of the United States. They were all very fast boats, and one of them probably deserves the title of fastest. Which one actually is quickest, I still believe, remains a question without an answer. The question, however, does solicit an opinion, and that is exactly where this all began.

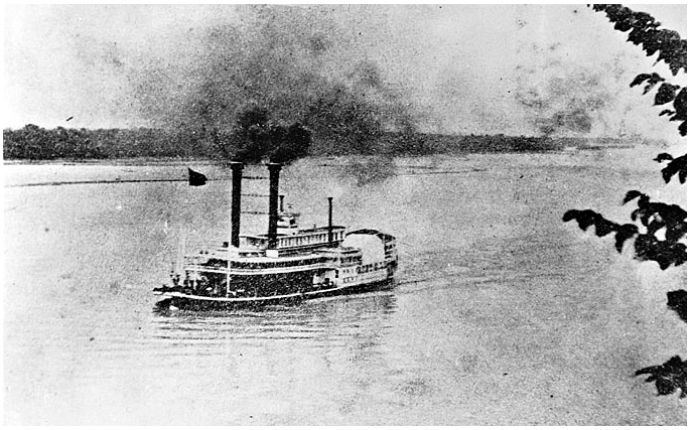
Most of the information presented here is supported from several sources. Where there were contradictions or disagreements, and there were many, I chose to report the information favored by general consensus. The information is, as far as I can determine, accurate.

There are undoubtedly boats that others feel should be included here and probably deserve mention. So in the list which follows are a few other vessels that would certainly qualify among the elite of the swift. Hopefully your favorite boat is included.

The List Continued

A. L. SHOTWELL (1852)	Mississippi
ALLEGHENY (1852)	Ohio
ALVIN ADAMS (1853)	Mississippi/Ohio
BELLE KEY (1849)	Mississippi
BRILLIANT (1848)	Ohio
DIE VERNON (1850)	Upper Mississippi
GEM CITY (1881)	Upper Mississippi
HANNIBAL CITY (1858)	Upper Mississippi
HAWKEYE STATE (1860)	Mississippi
HIBERNIA NO. 2 (1847)	Ohio
JAMES LUCAS (1856)	Missouri
MESSENGER NO. 2 (1849)	Ohio
PRINCESS (1855)	Mississippi
REINDEER (1851)	Mississippi
RUTH (1865)	Mississippi
SILVER HEELS (1857)	Missouri
SUCKER STATE (1860)	Mississippi
TELEGRAPH NO. 3 (1853)	Ohio
WAR EAGLE (1845)	Upper Mississippi

Silver trophy awarded to Capt. Cannon as victor in race between ROB'T. E. LEE and NATCHEZ, July 4, 1870.



ROB'T. E. LEE nearing St. Louis from Carondelet Bluffs below town at end of race on the morning of Monday, July 4, 1870. Both photos from Murphy Library, U. W. - La Crosse.

Steamboat Mural at Hickman

by Charles H. Bogart

During the Great Depression of the 1930s, the Federal Government, in order to stimulate the economy, built a number of new post offices. In 1938, the Works Progress Administration (WPA) built a post office at Hickman, KY, county seat of Fulton County and for many years an important port of call for packet boats. In 2014, the Port of Hickman is but a shadow of itself, although it hosts a number of barge grain loadouts and is the homeport for Coast Guard Cutter CHENA (WLR 75409).

In 1934, the U.S. Treasury Department, using WPA funds, created the Treasury Relief Art Project (TRAP). Directed by Edward Bruce, TRAP commissioned artists to produce 89 murals, 65 sculptures, and over 10,000 paintings for display at various Federal buildings between 1934 and 1943. Participating artists were chosen based on need and ability. A total of 190 competitions were held to select artists to produce the art work. Over 15,000 artists entered these competitions and 1,371 artists were awarded contracts. The typical post office mural commissioned by TRAP was twelve by five feet and depicted a scene of local historical interest. The artist was paid between $650 and $750 per work. The December 4, 1939 *Life* magazine article "Speaking of Pictures – This is Mural America for Rural America" has a photo spread showing commissioned post office murals from each of the 48 states.

Among the murals funded by TARP and pictured by *Life* magazine is one entitled "Mississippi Packets." Today this mural graces the south wall of the Hickman Post Office lobby. The painting was executed in 1940 by William Edward Lewis Bunn (1910-2009). Mr. Bunn, born in Muscatine, IA, was a designer, muralist, and artist for a number of murals and paintings commissioned by the U.S. Government in the 1930s and 1940s. Mr. Bunn's mural at the Hickman Post Office shows four Mississippi River packet boats, two side-wheelers, and two sternwheelers. From left to right, the boats pictured are GRAY EAGLE, J. M. WHITE,

continued on page 38

"Mississippi Packets" mural in Hickman, KY Post Office Lobby. All photos courtesy of Charles H. Bogart.

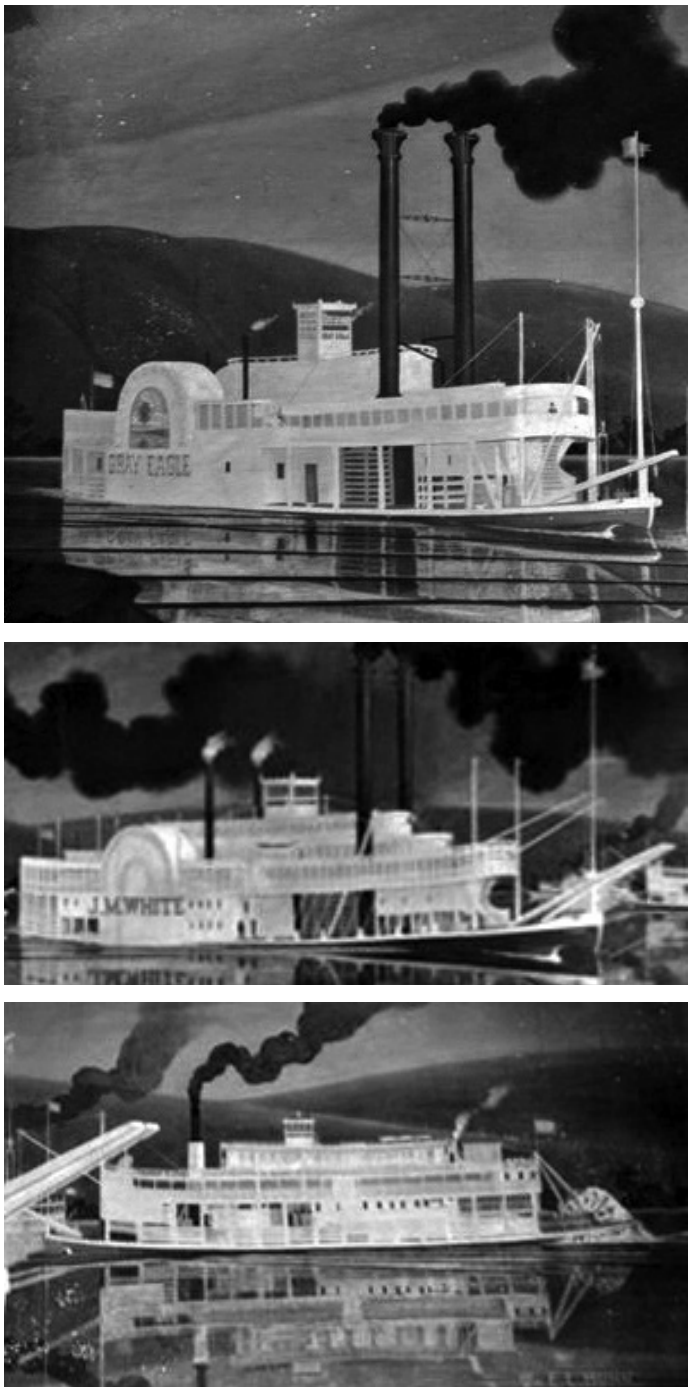
unknown, and GOLDEN EAGLE. Listed below is a description of each of these Mississippi packets.

GRAY EAGLE - Written in a semi-circle around the words GRAY EAGLE on the paddlewheel housing is "Keokuk Northern Line." This company operated on Upper Mississippi River from 1873 to 1880, but I can find no boat that carried the name GRAY EAGLE in *Way's Packet Directory* for this period or in a list of boats owned by this line. Thus, I assume that the name GRAY EAGLE is a creation of the artist or a misspelling of the famous GREY EAGLE (2457) of 1857-61 or the GREY EAGLE (2463) of 1892-1918 in the St. Louis-Cape Girardeau-Commerce trade. [It appears that Mr. Bunn was a more capable artist than historian - ed.]

J. M. WHITE (2867) -This side-wheel packet was built in 1878 by the Howard Shipyard and named for Capt. J. M. White of Cloverport, KY. She had an overall length of 321 feet and a beam of 91 feet. She had ten boilers and carried a paddlewheel 44 feet in diameter. She ran in the Vicksburg – New Orleans trade on the Lower Mississippi. On December 13, 1886, she caught fire while landed at Pointe Coupee Parish, LA, and was a total loss.

Unknown sternwheel packet boat.

GOLDEN EAGLE (2366) -This sternwheel boat was built in 1904 by Howard Shipyard as the cotton packet WM. GARIG. In 1918, she became Eagle Packet Company's GOLDEN EAGLE, who eventually converted her to a tourist boat. Sold in 1946 to private owners, she was again sold in 1947. GOLDEN EAGLE continued in tourist service until May 17, 1947, when she grounded on Grand Tower Island and her hull broke up.



Top to bottom: GRAY EAGLE, J. M. WHITE, GOLDEN EAGLE

ISLAND QUEEN Aground at Coney Island Landing in May 1929

Tom McNamara of Cincinnati sends us this article from the May 13, 1929 *Cincinnati Post* about the grounding of the ISLAND QUEEN. The newspaper story printed below is headlined "Mud Grips ISLAND QUEEN; Salvage Efforts Fail."

"The ISLAND QUEEN, excursion boat of the Coney Island Co., rested on the mud flats at Coney Island Monday, defying efforts of experts to float her. A heavy wind drove her broadside onto the bank Saturday [May 11], and a sudden drop in the river left her high and dry. John Eichley, Pittsburgh expert summoned by George F. Schott, president of the Coney Island Co., spent Sunday with the boat trying to devise means to float her without damaging the hull or toppling her from her upright position. But the weight of the vessel, constructed entirely of steel, makes ineffective all the usual tricks of Eichley's trade. The ISLAND QUEEN is one of the heaviest boats on the river.

"The stranding of the QUEEN occurred shortly after a crowd of Knights Templars had disembarked for an outing at Coney Island. Because the wharf regularly used was submerged by high water, the vessel had landed with her bow to the bank. Asudden gust of wind whirled the stern about and left the boat resting against the [shore]line. After the passengers had disembarked and before the crew could realize it, the river dropped and the vessel was mired. An additional recession in 24 hours, left the boat hopelessly stranded.

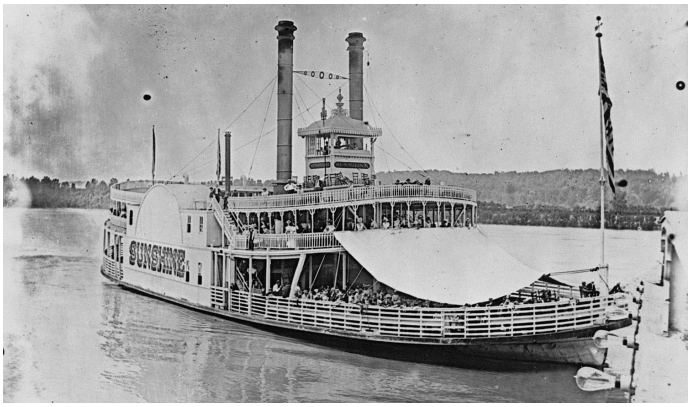
"Officials of Coney Island Co. hoped that the rains Sunday would put water under the boat's hull. But, after an inspection Monday, Schott said it would be 10 days before the QUEEN would be back in service. Thus the water route will not be used when Coney Island opens for the season next Saturday. The QUEEN's sister ship ISLAND MAID was destroyed by fire several weeks ago. Schott is canvassing packet lines the length of the river in an effort to charter a boat that can substitute for the QUEEN should she remain on the mud flats longer than expected. If the river stage recedes still further and the dry season comes on before ordinary methods of floating the QUEEN avail, it is possible that engineers might have to dredge a water inlet under her hull.

"Soundings have been taken of the river's depth, but it was found that at no place near the shore is there enough water to float the boat which weighs 1700 tons. Schott says the stranding of the QUEEN will not delay the opening of Coney Island. Arrangements will be made, if necessary, with the Cincinnati Street Railway Co. for enough busses to carry all passengers to the resort. Meanwhile, reconstruction of ISLAND MAID is going forward and she will be ready for service this week, according to Schott."

ISLAND QUEEN is successfully refloated after 12 days aground. Photo from June 1929 issue of Cincinnati Street Railway's* The News*, courtesy of Tom McNamara.

SUNSHINE Brightens Days for Holiday Picnickers

The Louisville and Jeffersonville Ferry Company, owner of the ferryboat SUNSHINE pictured on our front cover, also owned Fern Grove, a 118-acre picnic area and recreation site located 14 miles above the Falls of the Ohio near the mouth of 14 Mile Creek (Mile 589.3). The company had purchased Fern Grove in 1886 to increase their business by ferrying passengers to and from the park. Fern Grove thrived on church picnics and family outings, and SUNSHINE ran between the city and the park from 1888 to 1907. In addition to her ferry service, SUNSHINE also ran Moonlite excursions and frequent charter trips for picnic parties. The boat is shown below at Brandenburg, KY on a charter trip, with a large canvas awning providing shade for excursionists on her foredeck.

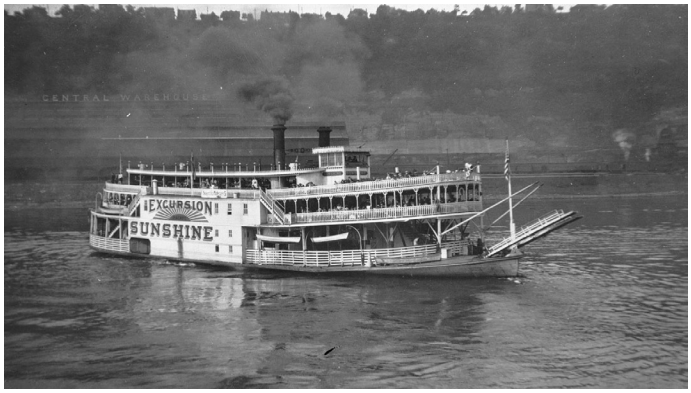


At Brandenburg, KY. From Murphy Library, UW-La Crosse

In 1923, David B. G. Rose purchased Fern Grove and renamed it Rose Island, installing a swimming pool, the "Devil's Backbone" roller coaster, a Ferris wheel, and a combination dance hall and ice rink. Overnight guests could stay at Fern Grove Hotel on site. By that time, several larger boats provided transportation to the park, including the well-known sidewheeler AMERICA and, for many summers, a visiting tramp steamer named IDLEWILD, destined to become BELLE OF LOUISVILLE.

In 1907, Capt. William McNally bought SUNSHINE and took her to Pittsburgh. In 1911, she was on the Smith Drydock at Point Pleasant, WV where her forward staircase was most likely removed, according to Capt. Fred Way, and her boiler deck extended forward. Her guards were narrowed and wheelhouses rebuilt to fit the Monongahela River locks. Interestingly, the ends of her shafts were cut off in place, using the boat's own engines to turn new journals. When completed, the shaft ends protruded through the wheelhouses, where the grease dripped down the sides as shown in the photo below. In 1918, Capt. McNally added a full length texas and double swinging stages.

On Smith Drydock. From Murphy Library, UW-La Crosse.

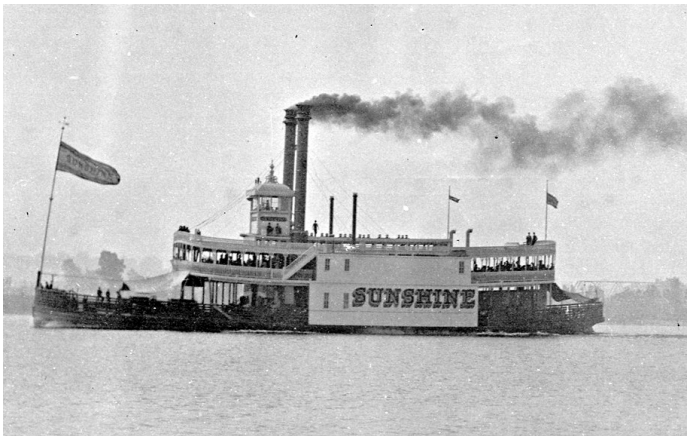


At Pittsburgh. From Murphy Library, UW - La Crosse.

On August 21, 1923, SUNSHINE was renamed PRINCESS (4594) when purchased by John W. Hubbard for the River Excursions Company of Cincinnati. Hubbard had also purchased Coney Island Amusement Park that year, following the disastrous fire the previous November which destroyed the first ISLAND QUEEN and MORNING STAR. These boats had run from the Cincinnati Public Landing to Coney Island, and the company was now without ferry service to the park. Hubbard kept his finger on the pulse of steamboat business in the Pittsburgh area, and knew exactly where older, worn-out boats were available for servicing his park. Joining PRINCESS in the Coney Island trade was the former packet VIRGINIA (5593) of cornfield fame [see March

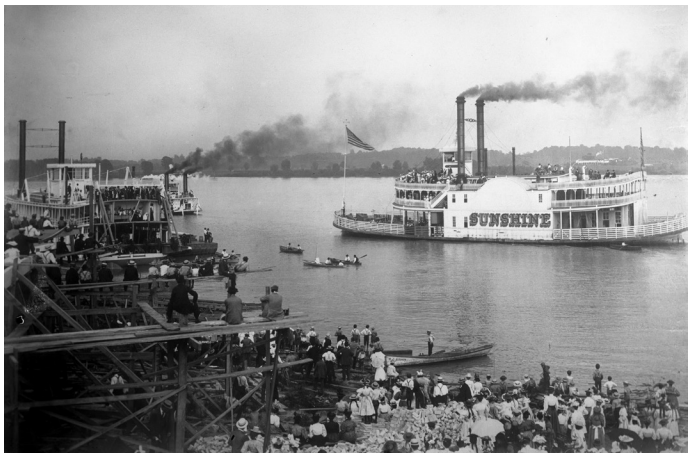
1966 and March 1973 issues of the REFLECTOR], and at that time running as the excursion boat EAST ST. LOUIS. She took on her fourth name, ISLAND BELLE (2793), and was soon joined by yet a third excursion steamer, the former G. W. HILL, now renamed ISLAND MAID. She was featured on the front cover of our March issue. PRINCESS ran in concert with her two larger cohorts until 1925, when the new ISLAND QUEEN entered service and she and ISLAND BELLE were no longer needed. However, PRINCESS continued to run excursions at Louisville and other Ohio River towns until she was destroyed by fire in winter layup at Jeffersonville, the place of her birth, in January 1928.

PRINCESS in Coney Island trade at Cincinnati. From Murphy Library, University of Wisconsin - La Crosse.



SUNSHINE when new plying her route between Louisville and Jeffersonville. Note the large pennant flying from her jackstaff. Photo from Howard Steamboat Photo Collection.

Louisville and Jeffersonville Ferry Company operated at least seven ferries between 1878 and 1917. They were NEW SHALLCROSS (4188) from 1878-1891; W. C. HITE (5625) from 1882-1914, later rebuilt into the excursion boat CORONA and operating until 1916; SUNSHINE, 1888-1907; CITY OF JEFFERSONVILLE (1086) 1891-1914; COLUMBIA (1245) 1892-1913; CARMANIA (0850) in 1914; and SHORT CUT (5100) in 1917, renamed TRANSIT in 1918.



SUNSHINE carries a crowd to witness a launch at Howard Shipyard. Photo from Howard Steamboat Photo Collection.

Rare view of ferry W. C. HITE landed at Fern Grove. Notice crowds on bank and sailboat at extreme left. Photo from Howard Steamboat Photo Collection.

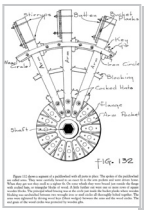
WAY'S PACKET DIRECTORY 1848-1994
ISBN No. 0821411063
List price at $39.95 plus $5 shipping/handling

WAY'S STEAM TOWBOAT DIRECTORY
ISBN No. 0921409697
List price at $39.95 plus $5 shipping/handling

**Note: any additional copies ordered ship for $1 each*

CONTACT

CHICAGO DISTRIBUTION CENTER
11030 South Langley Avenue
Chicago, IL 60628
Phone toll-free: 1-800-621-2736
Check, Money Order or Credit Card



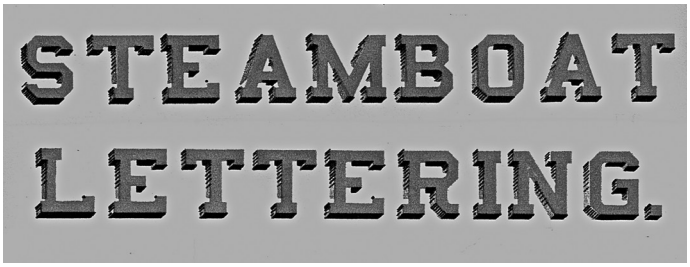
Small Stacks

Steamboat Lettering for Models

by John Fryant with Alan Bates

Way back in 1956, our late friend Alan Bates wrote an article about how lettering was done on old-time steamboats. This was published in the now long-defunct *Ships and the Sea* magazine, originally published from 1951 through 1958. Alan's writings were aimed at model builders and portions of his article are included in this column.

The most obvious lettering on a river steamboat appeared on the engineroom bulkheads of a sternwheeler or on the wheelhouse sides of a sidewheeler. According to Alan: "The spacing of these letters is what jars the sensitive viewer. They were spaced mechanically, not optically."

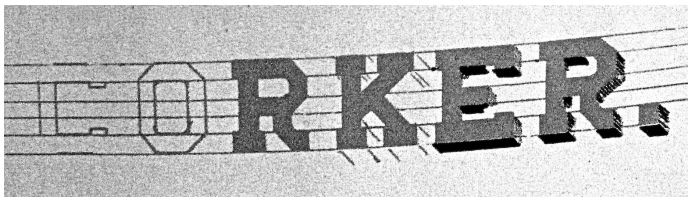


"The body of each letter is spaced an equal distance from its neighbor all along the line. This makes the space between M and B look smaller than the space between the B and O and the effect is even more pronounced between the A and T. The net effect makes the sign uncomfortable to the eye. Now, why were steamboat names done this way? Well sir, they were usually not painted by skilled letter painters, but were done by the crew of the boat, which had little or no training in such matters."

"A common grammatical error was the period after each word in a name. [This was common practice on nineteenth century signs and advertisements -JF.] This was also true of names on steamboats. Thus we see in old photographs NATCHEZ. or AMERICA. and champion of them all, ROBT. E. LEE. . In lettering steamboat models it is a good thing to keep these customs in mind."

As time went on more trained lettering artists and sign painters came along and the spacing of the large names on steamboat bulkheads became more normal looking. The big drop shaded block letters remained the same however. Also note that there was white spacing between the body of each letter and the drop shading. Of course there were always variations to this. Most of the very early steamers had lettered names with no drop shading at all. In the late nineteenth century, names on some of the large packets got very fancy treatment, particularly those on Anchor Line packets. There will be more about this in the next column on steamboat lettering.

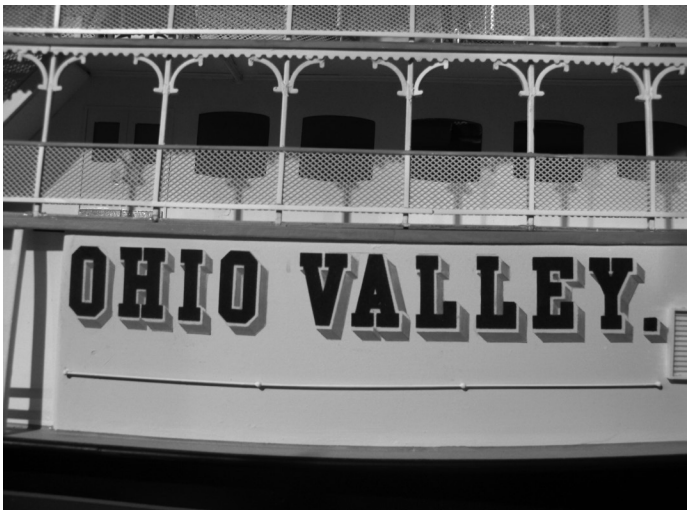
Another thing to remember is that lettering followed the sheer curve of the boat. Alan's illustration shows how the name CORKER was laid out using six horizontal lines. *Everything* on those old boats followed the sheer curves — doors, windows, shutters, railings and trim.



Coloring used on the letters could vary, but the usual practice was black for the body of the letters, while the shaded serifs often started with yellow at the top, blending to orange at the bottom and red on the under sides. This is more easily done with oil-based colors which lend themselves to shading due to their slower drying times.

The last steamboat model I lettered completely by hand was the sternwheeler SUSIE. As she was built to the larger 1/24th scale and with only five letters in her name, it was fairly easy to lay out the letters by hand. Unfortunately you don't see this

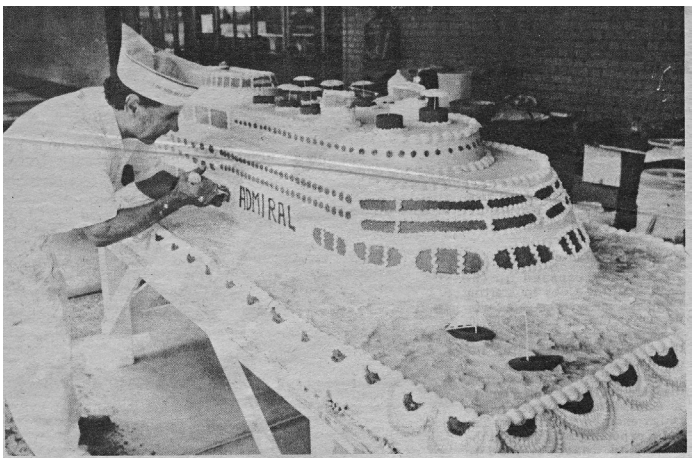
illustration in color, as it would show quite clearly how the shading was done. My more recent OHIO VALLEY model has computer-generated letters printed in black on plain paper, then cut out and glued on the bulkhead. The drop shading was then painted on by hand. Whatever method is used, it is far easier to install the lettering on the completed bulkhead before it is installed on the model.



Thanks to computer graphics, today's model builders have it much easier than those of twenty or thirty years ago. Computers now have a wider choice of lettering fonts available, and some are almost identical duplicates of the old-time block letters. However, I have yet to discover any block lettering fonts that have the multi-shaded serifs like the old-time boats. Today's computer gurus can probably generate the complete boat name, colored shading and all, with software such as Adobe Illustrator or Photoshop.

In the next column on steamboat lettering to appear in the December 2014 issue, there will be a bit more on this subject, along with some spectacular model photos. Small Stacks in the September issue will have a special feature to commemorate the BELLE OF LOUISVILLE's 100th anniversary.

Interested in becoming an S&D member? Go to www.s-and-d.org for your membership form and more information.



Cake Fit for an ADMIRAL

On page 111 of Tom Dunn's new book reviewed in this issue, mention is made of the campaign to "Save the ADMIRAL," launched in spring 1980. A unique part of that effort was the work of Chicago-based Entenmann's Bakery, whose products were being introduced in the St. Louis area at that time.

The caption from the photo shown here states, "Baker Frank Kundmann puts finishing touches on a 600-pound cake modeled after the famous riverboat ADMIRAL. Kundmann did the decorative work at the St. Louis County Government Center. The cake, 4 x 8 x 2 feet, took 110 pounds of eggs, 160 pounds of sugar, 140 pounds of flour, 100 pounds of butter and 26 quarts of milk to make. Cake layers were baked in Chicago and trucked to St. Louis. The cake was to go on sale for a dollar a slice to raise funds to restore the riverboat."

One other steamboat cake of considerably lesser note was baked in October 1982 for officers and crew of the DELTA QUEEN and presented on board during the boat's Dubuque shorestop.

"Reflections from Our Readers" continued from page 2

Gene Lister writes: "Your mention of JEWEL CITY in the last issue recalls a fermenting dream of the boat that was never built. It was my fervent hope to build such a vessel to augment passenger service provided by CAMDEN QUEEN, operating from Camden Park at Huntington, WV near Mile 313 Ohio River. I visited with Bill Preston at his Florida office in 1983 to explore this possibility, and he offered to render a plan view for consideration. This work was part of John Fryant's recent article in the March 2014 REFLECTOR. Seeing that picture really struck a nerve. I haven't been so motivated in years. Being a prudent shopper in those days, I also discussed this idea with Alan Bates, and have in my basement his plan for such a vessel. A smaller version of NATCHEZ, almost, and a fine piece of work, crying for development. The name JEWEL CITY is derived from the coal industry of "black diamonds" that was transshipped at Huntington from rail to river. Thus Huntington became known as the Jewel City. I thought it appropriate that a home-based passenger riverboat serving the community should bear that name. Checking with Capt. Fred Way I learned that this was an original name, which increased its fascination.

"Some years later, an employee of Jewel City Excursions, owner of CAMDEN QUEEN, engaged a small yard in Catlettsburg, KY to construct a scow bow propelled barge to carry passengers in this area, and he called it JEWEL CITY. It fell far short of the picturesque riverboat style of years past, and operated only a few seasons before being sold to someone in the Jeffersonville, IN area. It had sternwheel hydraulic drive, somewhat similar to that of DIXIE BELLE on the Kentucky River near Boonesboro, KY.

"I was attracted to DIXIE BELLE when she was for sale at Cincinnati. Conversations with some river people on the dock frightened me away, as they reported her top speed was 2 mph. On that day, the river was up and running at that rate. Simple arithmetic precluded her getting underway, and I turned her down. I learned later that she was purchased by Jim Cross and Bob Lumpp, and destined for Fort Boonesboro on Kentucky River where she remains yet today, serving tourists to the Shaker Village nearby. I met that boat upbound at Fort Boonesboro landing and asked Jim if he found out why she ran so slow. He reported the problem was a clogged hydraulic filter. After replacement, she ran fine. Soon after, I stumbled onto an ad in a trade journal listing the CITY OF WEST BEND, and the rest is history."

CAMDEN QUEEN. Photo courtesy of Gene Lister.

Gene also sends this photo of his CAMDEN QUEEN, formerly CITY OF WEST BEND. He owned and operated her from Camden Amusement Park 1977-1991, making hourly excursions on the Ohio from the park property along Twelvepole Creek. Gene sold her in 1993 to interests in Columbia, LA who renamed her CALDWELL QUEEN. Shortly after, Capt. Bob Foster bought her and hauled her to Schuylerville, NY on a couple of low boy trailers, launched her in Champlain Canal, and placed her in service as CALDWELL BELLE. She was sold once again this March to Maria Saavedra and Marla Hodge of Mohawk Maiden Cruises.

Fran Nash writes: "Your article in the March issue on the steamer GLADIATOR touched my family history. I can shine some light onto the Trimble speculation and Ohio River connection. Henry Trimble, listed as captain of the GLADIATOR, was James Henry Trimble. Three of his brothers also named in the article were William Ross, Samuel Campbell and John Alexander. All were steamboat captains and owners from Georgetown, PA. The documentary trail on James Henry (b. October 30, 1827) is meager. John Alexander Trimble (1833-1912) married Mollie Ebert for whom the MOLLIE EBERT (3995) was named. They were my great grandparents. Mollie Ebert's parents were Capt. George Washington Ebert and Nancy Ann

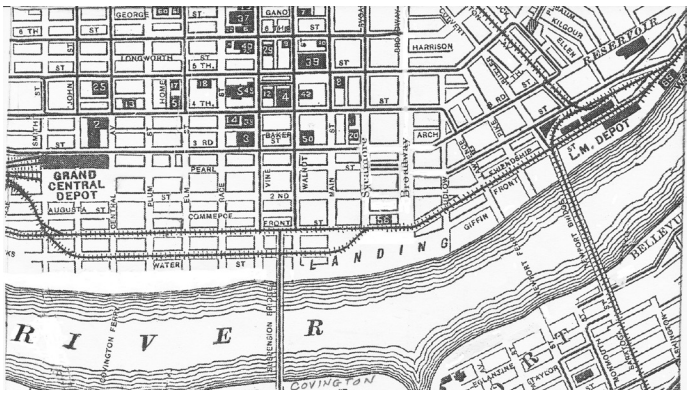
Poe. Note the connections of the Poes, Eberts and Trimbles. Capt. Samuel Campbell Trimble (1830-1892) purchased the BELMONT (0548) from Capt. George W. Ebert in 1859. All of the Georgetown rivermen worked on the Upper Mississippi after transporting troops and supplies during the Civil War. Approximately eighty percent of the boats that landed at Ft. Benton were from the Pittsburgh area working for packet lines based in St. Louis."

Fran has the thanks of your editor for his followup on the Trimble family and their connections with the steamer GLADIATOR reported in our last issue. The Georgetown/Beaver County and Pittsburgh area connections with Missouri River steamboating out of St. Louis sheds some new light on the crews who manned those pioneering mountain boats.

John White writes: "As to the wonderful photo of R. R. SPRINGER taken after her fast trip of April-May 1881, the scene is the Cincinnati Public Landing. Main Street can be seen just ahead of the smokestacks. The church spire above the pilothouse is from the First Presbyterian Church on 4th Street. The row of buildings stretching from the rear of the stacks to beyond the stern are of Sausage Row on Water Street. The row on the very right hand side is Front Street. Main Street was the western end of the Public Landing which ran several blocks to the east ending at Broadway along the Ohio River. There were several boat stores that supplied boats, but none are in view as far as I can tell. The building at the corner of Main and Front Streets was occupied by the Fireman's Insurance Company and is shown in the drawing below right in its earlier configuration as a four story office building built of freestone with a cast iron front on the lower story. In late 1858 a new five story brick building was erected on the site, and this is likely the building shown in the photograph of the SPRINGER.

"About midway on Front Street between Main and Sycamore was a boat store opened in about 1871 by Parker, Wise & Co. They sold all type of steamboat goods from line to pilot wheels. James D. Parker (1833-1920) of Petersburg, KY was a clerk in a store at Aurora, IN about 1856. He came to the attention of the Gaff Brothers distillers, who owned a fleet of river steamers. Parker became a clerk on one of their boats and did so well that he later became a captain. By 1865 he became secretary of the Nashville and Cincinnati Packet Co., reorganized as the Memphis and Cincinnati Packet Co. in 1872. In 1886, the boat store was reorganized as the Consolidated Boat Store and combined with the Cassilly Boat Store, an earlier firm. One of the earliest boat stores was established in about 1830 by Broadwell and Co. at the corner of Front and Sycamore. It was notable for the large scale model of a river steamer that sat on top of the roof. It was better than any sign in indicating the business of the establishment. The model remained in place until about 1850 when a lithograph of the Public Landing was issued by Otto Onken. Since this model was not depicted, I assume it had disappeared.

"Enclosed is a map and several illustrations of the riverfront as it once looked. All gone today, torn down in the 1960s and vacant for many years and still unfinished except for two stadiums and Freedom Museums. Once a thriving place of industry and shipping. I spent a few years there working at an old machine shop — John MacEowen Pump Co. on lower Central Avenue near the Ohio River in the West End of Cincinnati, far from the Public Landing."



A sincere thanks to Jack for this fascinating look at the Cincinnati riverfront and landing.

Final Crossings

Lawrence E. "Larry" Walker

Larry Walker, resident of Twin Towers Retirement Community, Cincinnati, and longtime S&D member and former treasurer, passed away January 30, 2014 at age 96. Larry and his late wife Ethel are fondly remembered at annual S&D meetings and on their many DELTA QUEEN trips. Larry's career was spent with Union Central Life Insurance Co. of Cincinnati.

A devoted fan of steamboats and the inland rivers, he crafted many fine wooden acorns in red, white and gold that continue to adorn a number of steamboats including the DELTA QUEEN and New Orleans' NATCHEZ, in whose pilothouse Larry proved himself an accomplished steersman. Larry and Ethel were former members of the Cincinnati chapter of SSHSA, and were stalwart members of S&D along with fellow Cincinnatians Dorothea, Roscoe and Mickey Frye; Capt. Bill and Darlene Judd; Bob McCann; Letha Greene; Capt. Jesse P. Hughes; and Dale Flick.

For a time, Larry and Ethel volunteered for Greene Line Steamers clipping and mounting press releases, photos and memorabilia for good friend Betty Blake. "Work and duty is what we do — our interests are what we are" was Larry's credo. Larry spoke softly, yet with knowledge and authority about steamboat history, technology, and the inland rivers. Veteran S&D member, river enthusiast and NATCHEZ crew member Judy Patsch recalls the annual fall pilgrimages the Walkers made to New Orleans in company with Dorothea Frye. Southern plantations, cemeteries, antique marts and yard sales resulted in the car's trunk being loaded with treasures from their "junkin' " trips.

"Ethel and I only go where the DELTA QUEEN takes us," Larry often said with a wink and a smile. Farewell, old friend. Have a great trip.

Our thanks to Dale Flick for penning this tribute to Larry.

Larry Walker. Photo courtesy of Judy Patsch.

Dr. Leland R. Johnson

Noted river historian and author Leland R. Johnson, 76, died on February 26, 2014 at his home in Westmoreland, TN. He was born in Joppa, IL near the Grand Chain of Rocks, where he helped his grandfather maintain the navigation light at the head of Grand Chain. He also worked with his uncles dragging the Ohio for mussel shells to make buttons. After earning a PhD. in history at Vanderbilt University, he taught at several colleges and universities prior to taking up a 40+ year-career as a writer, publishing over forty books and many articles and monographs dealing with history of engineering and water resources management.

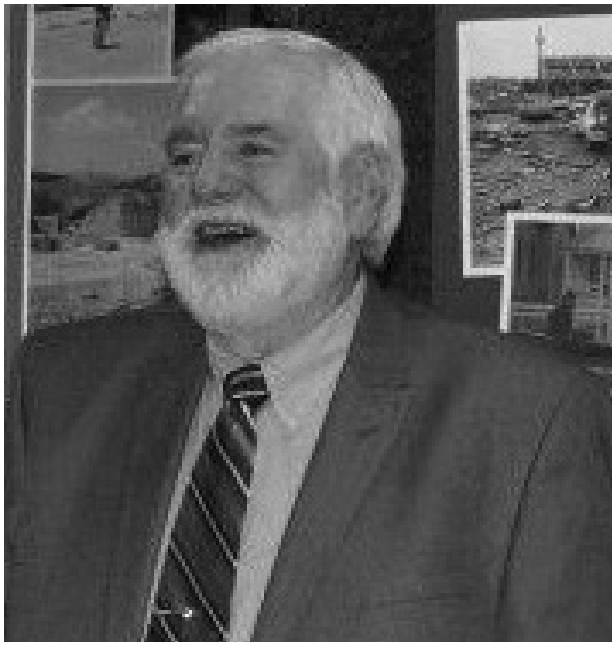
Leland wrote extensively for the Army Corps of Engineers, and his history of the Louisville District in 1974 was used as a model by the office of history in the Corps' headquarters. Leland's last publication, *Heroes at the Falls*, arrived at his home the day of his passing. He had generously shared his manuscript with readers of the REFLECTOR in the seven-part serialization of this story, ending in the December 2012 issue.

Leland also served as a consulting scholar on many museum exhibits, publications and symposia. He worked in that capacity for the Steamboat Bicentennial Project in 2011 and was a contributor to the book *Full Steam Ahead*. In addition, he also

shared his vast knowledge with other writers and historians, and was well-known for his amazing memory of dates and facts related to many subjects. He had a delightful sense of humor and a contagious laugh. Leland took delight in picking out tunes on his banjo, and requested a calliope recording from the DELTA QUEEN so he could play accompaniment.

Leland was friend and helper to many, most importantly his wife Ernestine and to three daughters and one son. He was a doting presence to five grandchildren and two great grandchildren.

The Reflector is indebted to Chuck Parish for this memorial to his longtime friend and colleague.



Dr. Leland Johnson. Photo courtesy of Chuck Parish.

Edward A. "Ed" Mueller

Ed Mueller, 90, historian, author, model builder, and steamboat photo collector, passed away on April 11, 2014 in Jacksonville, FL. He was born in Madison, WI and received his masters degree in civil engineering from Catholic University. He moved to Jacksonville, FL in 1973, and served as that state's Secretary of Transportation. Ed was a retired commander in the U. S. Navy, serving in World War II and later in the reserves.

He was associated for many years with the Maritime Museum in Jacksonville and was a foremost authority on Florida and East Coast steamboating, publishing five books about vessels from those regions. In addition, his Midwest roots led him to write *Upper Mississippi River Rafting Steamboats* in 1995. He edited two volumes for SSHSA, *The Stateliest Ship (Queen Mary)* and J. Mack Gamble's *Steamboating on the Muskingum.* Ed was also editor of SSHSA's quarterly *Steamboat Bill*, enlisting John Fryant's help in getting copy to the printer. Capt. Fred Way frequently printed rare steamboat photo discoveries from Ed's collection in the pages of this magazine as well. In recent years, Ed produced DVDs of St. John's River steamboats and covers from steamboat era sheet music.

Ed is survived by his wife of sixty years, Margaret "Peg" Mueller, a son Lynn (Norma) Mueller, a daughter Karen (Tim) Myers, two grandchildren and three great grandchildren. Memorials may be given to the Jacksonville Maritime Museum.

Thank you to John Fryant for providing this obituary for Ed.

Ed Mueller. Courtesy Hardage-Giddens Funeral Home

Back Cover

The cover of October 1929 issue of Cincinnati Street Railway's *The News* pictures Coney Island Co.'s ISLAND QUEEN and Streckfus Steamer's WASHINGTON headed upriver toward the park. See page 43 for details of CSR's rescue by bus of 1700 stranded passengers on the ISLAND QUEEN earlier that year. *Photo courtesy of Tom McNamara and reproduced through the kindness of the Cincinnati Transit Historical Association.*

The News

VOL. III NO. 10 OCTOBER 1929